A STUDY OF VISUAL AND CARDIOVASCULAR STANDARDS IN RELATION TO SUCCESS IN FLIGHT TRAINING

CIVIL AERONAUTICS ADMINISTRATION
TECHNICAL DEVELOPMENT & EVALUATION CENTER

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Committee on Selection and Training of Aircraft Pilots

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LETTER OF TRANSMITTAL

NATIONAL RESEARCH COUNCIL

2101 Constitution Avenue, Washington, D. C.
Division of Anthropology and Psychology

Committee on Selection and Training of Aircraft Pilots

June 11, 1946

Dr. Dean R. Brimhall
Director of Research
Civil Aeronautics Administration
Room 3895, Commerce Building
Washington, D. C.

Dear Dr. Brimhall:

Attached is a report entitled A Study of Visual and Cardiovascular Standards in Relation to Success in Flight Training, submitted by the Committee on Selection and Training of Aircraft Pilots with the recommendation that it be included in the series of Technical Reports of the Division of Research, Civil Aeronautics Administration.

The study described in this report represents a second in a series devoted to the investigation of the relationship between physical standards and accomplishment in learning to fly, conducted at British Flying Training Schools in the United States. The first, described in CAA Division of Research Report No. 26, revealed no relationship between visual and cardiovascular defects, respectively, and progress through elementary and advanced flight training courses. However, it was not possible to draw definitive conclusions from the first study because the medical records of a number of cadets who had failed or had been washed out early in the primary training course were unavailable for analysis.

The present report describes a repeat study involving student pilots attending four of the British Flying Training Schools. Again, medical records have been compared with performance in primary and advanced flight training. The findings confirm those of the first study with respect to the absence of relationship between visual and cardiovascular measures and performance in elementary and advanced flight training courses as determined by a variety of criteria.

The results are of practical significance in terms of the recruiting of individuals for flight training by the military services. Unfortunately, the implications for civilian private flight training are not so direct because a very small proportion of the subjects failed to meet the visual and cardiovascular standards now applied in the certification of private pilots

However, the data are of interest in connection with the original certification and re-examination of commercial and, more particularly, air transport pilots.

Cordially yours,

Morris S. Viteles, Chairman
Committee on Selection and
Training of Aircraft Pilots
National Research Council

MSV:pd

EDITORIAL FOREWORD

Physical requirements for the selection of applicants for flight training have been established primarily on the basis of expert medical judgments. Experimental investigation of the validity of such standards has, in the past, been hampered by the fact that only applicants meeting the established standards were given an opportunity to undergo a full program of flight training.

Standards employed by the British Royal Air Force, particularly during the earlier phases of World War II, were lower in many respects than those employed in the selection of aviation cadets for the Army and Navy Air Forces of the United States. During the war, schools for the training of RAF student pilots were maintained in this country. Because the physical standards for the British Royal Air Force were somewhat lower than were the standards for the American services, performance of British flight cadets who fell below the American standards could be compared with the performance of other British cadets who met the American standards. Through the cooperation of the Director General of Medical Services, Royal Air Force, and of the RAF Delegation in this country, arrangements were made for conducting a study of the relationship between physical standards and accomplishment in learning to fly at five British Flying Training Schools in the United States.

Two such studies have been conducted. The first, described in CAA Division of Research Report No. 26, revealed no relationship between visual and cardiovascular defects, respectively, and progress through elementary and advanced flight training courses. However, it was not possible to draw definitive conclusions from the first study because the medical records of a number of cadets who had failed or had been washed out early in the primary training course were unavailable for analysis.

The present report describes a repeat study involving student pilots attending four of the British Flying Training Schools. Again, medical records have been compared with performance in primary and advanced flight training. The findings confirm those of the first study with respect to the absence of relationship between visual and cardiovascular measures and performance in elementary and advanced flight training courses as determined by a variety of criteria.

The results are of practical significance in terms of the recruiting of individuals for flight training by the military services. Unfortunately, the implications for civilian private flight training are not so direct because a very small proportion of the subjects failed to meet the visual and cardiovascular standards now applied in the certification of private pilots. However, the data are of interest in connection with the original certification and re-examination of commercial and, more particularly, air transport pilots.

These studies were undertaken originally at the suggestion of Dean R. Brimhall, Director of Research, Civil Aeronautics Administration. The study described in this report is an outcome of the work of the National Research Council Committee on Selection and Training of Aircraft Pilots.

The details of the study were outlined by the staff of the Committee in cooperation with Raymond Franzen, Consultant to the Division of Research, Civil Aeronautics Administration, and to the Committee on Selection and Training of Aircraft Pilots. The statistical analysis was made by Raymond Franzen. The report was written by the Editorial Staff of the Committee on Selection and Training of Aircraft Pilots, in particular, by E. S. Ewart.

Acknowledgment is due to Wing Cdr. P. A. Lee, formerly attached to the RAF Delegation, with the approval of Air Marshall Sir H. E. Whittingham, who was largely instrumental in providing facilities for the studies. The medical examinations referred to in this report were made by air surgeons from the Army Air Forces attached to the British Flying Training Schools. Acknowledgment is made of the cooperation of the Office of the Air Surgeon, Army Air Forces, in the conduct of the study.

Morris S. Viteles, Chairman
Committee on Selection and
Training of Aircraft Pilots

May 9, 1946

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SUMMARY

The present study represents an investigation of the relationships between incidence of visual and cardiovascular defect (defined generally in terms of medical standards employed in selection of pilots for the United States Army and Navy Air Forces) and measures of success in flight training. The investigation was conducted on four samples of RAF cadets in training at four centers in the United States and performance in the elementary and advanced training courses was studied. Since the RAF visual and cardiovascular standards are less stringent than those of the United States services, it was possible to investigate the flight proficiency of cadets who fell below the American standards.

Analysis of data from the four schools indicated that within the limits of the samples there were no significant relationships over the four schools, between the visual and cardiovascular defects investigated and criterion measures of proficiency in the flight training course. The data were evaluated statistically by means of chi-squared and although a few statistically significant chi-squareds were obtained, no consistent trends were evident over the four schools and the distribution of chi-squared was, in general, that expected on the basis of chance relationships only. The physiological measures to which these results primarily apply are: Visual Acuity, Depth Perception, Accommodation, and Systolic Blood Pressure.

Although no data are available bearing on the relationship of visual and cardiovascular defect to the ability to withstand the rigors of operational and combat flying, it is emphasized that the results of this study indicate that future research should be concentrated in this area. As far as success in flight training is concerned, it is apparent that the present Army and Navy standards are unnecessarily stringent.

An investigation of the relationship between criterion measures, conducted supplementary to the principal analysis, indicated that the individual criterion measures of flight proficiency, while positively related, were not intercorrelated to any marked degree The correlations between the same measures taken in elementary and advanced flight courses similarly were not high with two exceptions. While the measures of flight proficiency taken during elementary and advanced training failed to show significant relationships, the measures of proficiency on the Link Trainer, and particularly ratings on "Character and Leadership," proved to be significantly and relatively highly related when the correlations between ratings made during the elementary and advanced courses were examined.

A STUDY OF VISUAL AND CARDIOVASCULAR STANDARDS IN RELATION TO SUCCESS IN FLIGHT TRAINING

INTRODUCTION

Physical standards for the selection of military pilots and for civilian pilots as well, have in general been set in terms of a priori judgments of the level at which various physiological variables (e.g., visual acuity) represent a significant handicap to success in learning to fly. Although, in general, medical examiners agree that physical disability is a handicap to flight training, they have generally not determined experimentally the degree of disability which limits success. Because of this, it seemed quite possible that many potentially good pilots were being eliminated by the medical standards at present adhered to by the services. It is evident that if the pool of applicants for flight training becomes smaller, or if contingencies in the future demand that a greater proportion of applicants be accepted to meet the needs of the services, the validity of the selection and elimination standards will become more and more acute.

An opportunity to investigate the validity of Army and Navy medical standards of acceptance for applicants for military flight training was afforded by the circumstance that records of British Royal Air Force cadets who were receiving flight instruction in this country were available for study. The physical standards, particularly visual and cardiovascular, used in the original selection of these men were somewhat less strict than those employed by the American Air Forces.[1] In an earlier study[2] the success in flight training of two groups of Royal Air Force cadets was analyzed: (1) one group being composed of cadets who would have been acceptable both in terms of American and British standards, and (2) the other group being composed of cadets accepted in terms of the British standards, but who were below American standards and who would have been eliminated had they applied for training in the American Air Forces. Primarily, the standards of acceptance for measures of (1) pulse, (2) systolic and diastolic pressure, and (3) visual acuity in the worst eye were investigated with respect to success in flight training.

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[1] Data taken from medical records and reports of success in flight training, available from the American Air Forces, could not be used in evaluating the American standards since while the number of successful pilots who meet these standards can be determined, evidence bearing upon the flight performance of applicants below the physical standards is not available since all such men were rejected for training.

[2] Brimhall, Dean R., and Franzen, Raymond. A preliminary study of physical standards in relation to success in flight training. Washington, D. C.: CAA Division of Research, Report No. 26. February 1944.

It was found that there was little, if any, association between the approximate levels of acceptance now employed by the American Air Forces and the incidence of failure in flight training. It was also demonstrated that certain other factors (height, weight, chest circumference, body build, elasticity of arterial walls, the amount the cadet smoked or drank, etc.) did not distinguish the cadets who passed flight training from those who were failed. Further, these same factors did not differentiate the cadets with respect to degree of success in flight training.

A shortcoming of this earlier study was that medical records on a number of cadets who had been failed or "washed out" early in the primary training course were unavailable for analysis. Thus, the possibility remained that had these early failers been included in the study some degree of relationship between the medical factors and success in flight training might have been evident. This shortcoming of the previous study has been corrected in the present investigation, in that medical records of a representative sample of all cadets in training at the centers investigated have been included in the data.

PROBLEM

The present study, conducted with four groups of RAF cadets training in this country, was designed primarily to determine if the incidence of visual and cardiovascular defect (in terms of standards of the American Air Forces) was significantly related to degree of success in flight training and in particular to the success or failure of the subjects in the flight training course.

As a by-product of this principal investigation, i.e., as a supplementary analysis, the interrelationships between criterion measures were studied.

SUBJECTS

The RAF cadets used in this investigation were stationed and in training at four centers; Clewiston, Florida; Miami, Oklahoma; Terrell, Texas; and Mesa, Arizona. In general, the cadets proceeded from elementary to advanced training at their respective schools. The total number of cadets entering training at each of these schools and the number of cadets actually used in this investigation who passed and failed in elementary or advanced flight training are given in Table 1. It will be noted that the number of subjects who entered training at the various schools is somewhat greater than the number of subjects included in the analysis of data from the elementary subjects. This resulted from the fact that medical records or other necessary data were not available for some of the cadets, including both passers and failers. It will also be observed that the total number available for analysis in the advanced class at Terrell is one less than the total number available for analysis who

passed the elementary course. This case was dropped or transferred at the completion of elementary training for unexplained reasons. A complete breakdown or analysis of cases in advanced training at the four schools is given in Appendix 1.

TABLE 1

NUMBER OF SUBJECTS AT THE FOUR FLIGHT TRAINING SCHOOLS

	Elementary Subjects Used in Study					Advanced Subjects Used in Study			
School	Number in Training	Passers with Flight Records	Passers* without Flight Records	Failers	Total	Passers with Flight Records	Passers* without Flight Records	Failers	Total
Clewiston	111	82	0	12	94	63	2	17	82
Miami	112	87	1	11	99	77	2	9	88
Terrell	111	85	3	13	101	74	6	7	87
Mesa	112	87	6	5	98	71	12	10	93

*Passers who lacked detailed flight records were included in the analysis in terms of the Pass-Fail criterion, but were excluded from the analysis in terms of detailed flight criteria. Detailed criterion measures were not available for subjects who failed the course.

MEDICAL STANDARDS AND EXAMINATION PROCEDURES

Sources from Which Medical Standards were Drawn. The medical standards used in this analysis were drawn from the following sources:

Army Regulations No. 40-110: Medical Department, Standards of Physical Examination for Flying.

Army Regulations No. 40-105: Medical Department, Standards of Physical Examination for Commission in Regular Army, National Guard of the U. S., Army of U. S., and Organized Reserves.

Physical Examinations for the Medical Department of the U. S. Navy (reprint of Chapter 11, Manual of the Medical Department, 1938).

Visual Standards Used in the Experiment. The visual standards in terms of which "disability" was defined in this investigation are presented in Table 2. On the right of this table are outlined the Army standards taken from Army regulations. On the left of this table are the definitions of the standards in terms of the several visual variables as actually used in this research. It will be noted that for all variables except Accommodation and Visual Acuity the standards as set in this study

are somewhat less lenient than the Army standards. This more strict interpretation of visual standards was made in order to conform to the 1938 Navy standards and applied to all variables for which Naval standards were more stringent than were the Army's. In the case of Accommodation and Visual Acuity the Army and Navy standards were the same.

TABLE 2

STANDARDS OF PHYSICAL EXAMINATION FOR FLYING

Visual Disqualification	Army Regulations No. 40-110	Standards Used to Represent Stricter Interpretation (Conform to 1938 Navy Standards)
Visual Acuity - R.E. & L.E.	Less than 20/20 for each eye	Less than 20/20 for each eye
Depth Perception	31 or more	26 or more
Heterophoria at 6 Meters	10 or more 6 or more 2 or more	Esophoria 5 or more Exophoria 3 or more R.H. and L.H. 2 or more
Prism Divergence	16 or more and 2 or less	10 or more and 1 or less
Angle of Convergence	PcB & Pd. -- the distance from the base line to the near point of convergence (PcB.) must not exceed the inter-pupillary distance by more than 25 millimeters	Angle of Convergence = $\frac{1/2\ Pd. \times 100 + 3}{PcB.}$ Smaller than 40° is disqualifying
Accommodation	(Army and Navy standards are the same) Rt. & Lt. -- more than 3 diopters below the mean for the examinee's age in either eye Average age -- 25 years, limits: 7.1 diopters or less and 13.3 diopters or more	

Cardiovascular Standards Used in the Experiment In as much as the Army and Navy regulations regarding cardiovascular defects are stated in qualitative as well as in quantitative terms, it was not possible to duplicate them exactly in setting standards for the present experiment. (An excerpt from Army Regulations No. 40-110 pertaining to cardiovascular standards is presented in Appendix 2. The statement of Navy standards is similar to this.) However, the standards selected for investigation were set at points very closely approximating those given in the regulations. The various cardiovascular points selected for investigation are outlined in Table 3 below. In regard to systolic pressure it will be noted that cut-off points are set on the continuum which define what can be termed high systolic pressure, marginally high systolic pressure, marginally low systolic pressure, and low systolic pressure.

TABLE 3

STANDARDS OF PHYSICAL EXAMINATION FOR FLYING

(Cardiovascular Points Used in This Investigation)

Systolic Blood Pressure	Diastolic Blood Pressure
140 and over	90 and over
135 to 139	85 to 89
100 and under	
101 to 105	

Medical Elements Excluded from the Study. A number of elements from the medical examination were excluded from the study due to the fact that insufficient data were available, because insufficient variance was evident in terms of the element, or for other reasons. The medical elements excluded from the study and the reason for their exclusion are given in Appendix 3.

CRITERION MEASURES

The criterion measures on the subjects in this investigation were taken from entries in the RAF Training Report, Pilot (RAF Form 5012). At the completion of the course, a Training Report was completed for each cadet. If a trainee was eliminated a suspension report was filled. However, most of the criterion data included on the Training Report were not supplied in the case of eliminees. A reproduction of the Training Report for elementary cadets is given in Figure 1.

Criterion Measures Available on Elementary Cadets.

1. The following measures were available on the basis of the flying tests.

a. Ratings on the following areas of flight proficiency:

(1) General Flying

(2) Instrument Flying

(3) Night Flying

(4) Link Trainer

b. Total Flying Test grade or score. This measure was represented by a summation of the scores assigned in terms of the four variables above. As is evident from Figure 1, the four variables which contributed to the total flying test score were not all weighted equally, the variable "General Flying" being most heavily weighted, contributing a possible 600 points to the maximum possible Total Flying Test score of 1000.

Two types of measures were available from the Total Flying Test score: (1) the absolute score, and (2) the "order of merit," which represented the rank order position of the subject on the Flying Test score in terms of the population of cadets at the school in which he was enrolled.

2. The following additional measures bearing upon the subject's flight proficiency were obtained.

a. Number of hours dual instruction prior to first daytime solo flight.

b. Total number of hours dual daytime instruction during the course.

c. Suitability ratings. At the completion of the course the cadets were rated as to their suitability for (1) piloting Bomber type aircraft, (2) piloting Fighter type aircraft, and (3) flight instruction work. Ratings were made in terms of four categories: (1) not at all suitable, (2) moderately suitable, (3) definitely suitable, and (4) extremely suitable.

3. The following measures less directly associated with flight proficiency were also obtained.

a. Total score from ground school examinations. As is evident from Figure 1, this measure represented the summation of marks assigned to ground school examinations in (1) Airmanship, (2) Armament, (3) Meteorology, (4) Navigation, and (5) Signals. As in the case of the Total Flight Test grade, measures represented by the absolute score and "order of

Confidential

R.A.F. Form 951A
(for use in U.S.A.)
Elementary

R.A.F.—TRAINING REPORT

PILOT

School No. 1 BFTS (at Terrell, Texas)

1. Surname _____ Christian Names _____

2. Number _____ 3. Rank AC2 4. Course No. 22 (Jan.'45 output)

5. Posted from 9 BFTS Cambridge USA 6. Date course commenced 1 Jun 20,'44 7. Date course ended Aug.26,'44 8. Posted to Advanced

9. Ground Examinations			10. Flying Tests		
Subject	Marks Allotted	Marks Obtained	Subject	Marks Allotted	Marks Obtained
(a) Airmanship .	300	180	(a) General Flying ...	600	363
(b) Armament . ..	300	244	(b) Instrument Flying	250	188
(c) Meteorology	100	87	(c) Night Flying	100	78
(d) Navigation . .	200	180	(d) Link Trainer	50	34
(e) Signals .	100	86			
Total .. .	1,000	877	Total .. .	1,000	663
Order of Merit 9/97	Per Cent. 84		Order of Merit 8/97	Per Cent. 66	

11 Assessment of qualities of Character and Leadership	Marks Allotted	Marks Obtained	Order of Merit
	100	77	17/97

Degree of suitability for further training	0 Not at all suitable	1 Moderately suitable	2 Definitely suitable	3 Extremely suitable
12. For Bomber type aircraft		X		
13 For Fighter type aircraft			X	
14. As a Flying Instructor .	X			

(Mark 'X' in appropriate column for each)

15 If a copy of a later report for this pupil is desired, mark here ☐

16. Remarks:— PRIMARY FINAL RE-SIT GRADES: ARMAMENTS: 244- AIRMANSHIP: 188- METEOROLOGY: 86- NAVIGATION 188; SIGNALS: 86- OVERALL: 70.1

Date August 28, 1944

Signed F.H. TOMKINS, Wing Commander
Officer Commanding

(N.B.—Flying Times and Accident Record shown overleaf)

FIGURE 1

AF TRAINING REPORT (PILOT)

17. **Flying Times** (At this Unit):

Type of Aircraft	Time	Dual to 1st Solo	Total dual	Solo	Passenger	Formation	Instrument	Link Trainer
PT	Day —	14:06	30:24	20:34			5:05	8:00
	Night...	1:45	3:55	2:07				
	Day ...							
	Night...							

18. **Flying Accidents.**—All flying accidents in which this pupil was concerned while at this unit are to be noted below, whether serious or trivial, whether otherwise reported or not. If there were no such accidents, write in "None."

(1) Type of Aircraft	(2) Date of Accident	(3) Day or Night	(4) Previous Reports	(5) Nature of Accident	(6) Amount of Damage	(7) Degree of pupil's responsibility	
(Name)	Day Month Year	"D" or "N"	e.g. 765a Number or other reports (if any)	Use one or two words (e.g "Taxying" "Heavy Landing" "Over-shooting" etc.)	"R.U." "R.R.U." or "W.O."*	"None" "Partial" "Full" or "Unknown"	Comment e.g. "Engine Failure" "Inexperience" "Carelessness," etc.
				NIL			

*Column (6) above: "R.U." —Repairable at Unit.
"R.R.U."—Repairable away from Unit.
"W.O." —Write off.

merit" of the subject were available.[3]

b. Character and leadership ratings. Assignment of these ratings, representing an "Assessment of Qualities of Character and Leadership," were made in terms of a 100-point scale, i.e., a maximum of 100 points were "allotted" to this assessment. In addition, the "order of merit" of the subject was available.

Criterion Measures Available on Advanced Cadets. The criterion measures taken for the advanced cadets were the same as for the elementary subjects with the following exceptions:

1. To the variables contributing to the Total Flying Test score was added "Applied Flying." The list of variables contributing to this score and the maximum number of points or "marks" allotted to each were therefore:

Subject	Maximum Number of "Marks" Allotted
General Flying	400
Applied Flying	200
Instrument Flying	250
Night Flying	100
Link Trainer	50
Total (Flying Test Score)	1000

2. The variables, "Number of hours dual instruction prior to first daytime solo," and "Total number of hours dual daytime instruction," included in the investigation of elementary cadets were not used in that part of the study devoted to the advanced student pilots.

3. In addition to obtaining ratings in terms of a four-point scale, on suitability for Bomber type craft, Fighter type craft, and flight instruction, advanced cadets were also rated on suitability for General Reconnaissance aircraft, Army cooperation aircraft, Flying boats, and for Transport duties.

RESULTS OF PRINCIPAL INVESTIGATION

Distribution of Visual and Cardiovascular Variables. The distributions of visual and cardiovascular defects by schools are given in Table

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[3]However, in contrast to the procedure followed in the case of the Total Flight Test grade, the individual variables contributing to the Total Ground Examination score were not treated separately in the statistical analysis.

4. Certain anomalies in these distributions merit attention. It is difficult to understand, for example, why systolic pressure between 100 and 105 should be so much more prevalent at Clemiston and why the distribution of prism divergence at Terrell should differ so markedly from the distributions in terms of this variable at the other three schools. It is suggested that differences in examining procedures might account for these discrepancies. However, the nature of the data provided no further opportunity for the investigation of this point. It should also be noted that only a few subjects fell below the critical points in terms of a number of the visual variables. Reference to Table 4 indicates that although an appreciable number of subjects fell below the critical points in terms of Acuity, Depth Perception, and Accommodation respectively, relatively few or none were below the critical points in terms of heterophoria, angle of convergence, and (with the exception of the Terrell cases which were atypical) prism divergence. Examination of Table 4 also indicates that considerably more applicants were below standard in terms of systolic blood pressure than in terms of diastolic blood pressure.

The complete distributions of cases in terms of measures on all of the visual and cardiovascular variables are presented in Appendix 4. Examination of these distributions presented in Appendix 4 indicates that even in regard to those variables in terms of which the greatest number of defect cases were evident, very few cases fell markedly below the standards. For example, although at the four schools there were 41 cases below the Navy and Army standards for Visual Acuity (which are the same) only one case fell below the standards required for the private pilot license (less than 20/30 corrected vision in either eye). In the case of the test of Depth Perception, inspection of Appendix 4 and Table 4, indicates that whereas there were 61 subjects below the Navy standards, a score of 26 mm. or more disqualified an applicant) there were only 14 cases below the Army standards (31 mm. or more disqualifies), and still fewer in terms of the standards for the private license which permit the applicant to wear correcting lenses.

Means and Standard Deviations of Criterion Elements. The means and standard deviations of criterion elements at the four schools are presented for the elementary group in Table 5, and for the advanced group in Table 5a. It is to be noted that several marked differences in means are evident, particularly in regard to the Time measures. This may be accounted for in part by differences in procedure at the various schools. In as much as data from each school are treated separately, the above differences between schools were not examined further.

Procedures Employed in Analysis of Data. Data from all criteria (except the suitability ratings) were converted into standard scores, the standard scores for cadets at a given school being computed on the basis of the sample of pilots in training at that school. Tabulations were then made indicating the incidence of visual defect and cardiovascular defect, respectively, in terms of the scores on each of the several criteria. In regard to the suitability ratings, each type of suitability rating was

TABLE 4

DISTRIBUTION OF VISUAL AND CARDIOVASCULAR DEFECTS BY SCHOOLS
(Elementary Subjects)

	MESA	TERRELL	MIAMI	CLEWISTON
	98 Cases	101 Cases	99 Cases	95 Cases*
Visual Acuity				
20/20 or better in either or both	89	91	91	81
Worse than 20/20 " " " "	9	10	8	14
Depth Perception				
1 - 25	78	89	86	79
26 - 30	17	8	11	11
31 or more	3	4	2	5
Heterophoria				
Esophoria - 0 - 4	98	98	94	93
5 - 9	0	3	4	2
10 or more	0	0	1	0
Exophoria - 0 - 2	94	100	97	91
3 - 5	4	1	2	4
6 or more	0	0	0	0
Right and/or Left Hyperophoria				
0 - 1	98	101	99	95
2 or more	0	0	0	0
Prism Divergence				
3 - 9	98	75	99	94
0-1-10-15	0	26	0	1
0-2 - 16 or more	0	0	0	0
Angle of Convergence				
PoB. & Pd. - 1° - 39°	0	0	0	0
40° or more	98	101	99	95
Accommodation				
Right and/or Left - 7.2 - 13.2	90	87	94	85
7.1 or less and 13.3 or more	8	14	5	10
Cardiovascular				
Systolic - 140 and over	14	2	6	0
135 - 139	5	5	6	0
106 - 134	78	94	83	81
101 - 105	0	0	4	13
100 and under	1	0	0	1
Diastolic - 90 and over	0	0	4	0
85 - 89	1	0	1	1
84 and under	97	101	94	94

*One of the Clewiston cases, although having a medical and flight record, was omitted from the analysis because the pilot was not given a "Night Flying Test." The maximum number of cases available from Clewiston was, therefore, 94, as indicated in Tables 1, 6, and 8.

TABLE 5

MEANS AND STANDARD DEVIATIONS OF ELEMENTARY CRITERION ELEMENTS

	MESA		TERRELL		MIAMI		CLEWISTON	
Criterion Elements	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Flying Test	50.2	28.4	46.9	27.5	49.3	28.5	45.7	25.9
Ground Exam	50.5	28.5	45.9	26.2	49.8	28.3	49.4	25.8
Character and Leadership	48.4	28.5	42.5	26.8	44.5	27.1	44.6	27.3
General	442.4	41.9	425.1	42.8	402.3	37.3	391.0	52.1
Instrument	183.0	22.2	173.3	15.1	153.9	16.6	162.3	20.2
Night	73.1	7.3	76.4	5.9	69.8	8.4	65.6	8.4
Link	34.4	4.4	32.0	1.7	33.2	2.7	35.3	5.4
Day*- Dual to 1st Solo	512	42	492	97	542	77	574	72
Total Dual	1825	53	2024	142	1948	129	1864	107
Solo	2026	40	1850	181	1957	126	2046	112
Night*-Dual to 1st Solo	216	53	109	21	124	29	169	48
Total Dual	280	34	255	36	231	30	262	30
Solo	72	27	112	31	72	24	45	35

*Time measures are expressed in minutes.

TABLE 5a

MEANS AND STANDARD DEVIATIONS OF ADVANCED CRITERION ELEMENTS

	MESA		TERRELL		MIAMI		CLEWISTON	
Criterion Elements	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
General	249.2	15.8	303.4	26.3	278.6	21.3	280.0	15.8
Instrument	153.4	12.0	189.7	13.0	175.3	16.5	179.8	18.4
Night	61.4	5.2	76.5	6.3	70.6	9.0	71.2	5.4
Link	36.0	2.1	36.2	1.2	33.9	4.3	34.2	6.8
Applied Flying	122.1	11.6	151.5	10.2	126.6	12.8	142.7	7.9
Flying Test	41.9	23.1	42.4	23.7	45.6	24.9	34.7	21.1
Ground Exam	42.1	24.1	41.2	23.5	45.0	25.2	39.0	20.5
Character and Leadership	40.1	23.1	40.3	23.7	40.5	24.3	36.5	20.4

owed in the following manner:

"Not at all suitable	0
"Moderately suitable"	1
"Definitely suitable"	2
"Extremely suitable"	3

All combinations of ratings for suitability for the three types of training are included in the distributions labelled "Occurrence of Visual Defect in Terms of the 'Suitability Test' Distribution" which are included in Appendix 5 for elementary students and in Appendix 6 for advanced students.

The significance of the relationships between the incidence of visual and cardiovascular defect, respectively, was evaluated in terms of the distributions of scores on each of the several criterion measures through the application of chi-squared. In the case of the "suitability ratings" chi-squared probabilities were determined for each type of suitability by itself, and in addition a general chi-squared probability was computed for the best score made on any of the three types. The significance of the relationship between incidence of visual and cardiovascular defect, respectively, and the "Passed-Eliminated" criterion (i.e., passing or failing the flight course as a whole) was determined through the application of chi.

Relationship Between Visual Defect and Criteria. In Tables 6 and 6a are presented the values of chi[4] and associated p values indicative of the relationship between incidence of visual defect and passing or failing in the elementary and the advanced flight courses, respectively, at the four schools. Examination of these tables indicates that at none of the four schools, in either the elementary or advanced courses, is a statistically significant relationship evident between incidence of visual defect and the pass-fail criterion, the p values in no case being less than .20.

In Tables 7 and 7a are listed the chi-squaredsand associated p values indicative of the relationship between visual defect and criterion scores of subjects who passed the elementary and advanced classes, respectively, at the four schools. It should be emphasized that statistics in these tables are based on passers only, detailed criterion information not being available for subjects who failed the course. The original distributions from which the chi-squaredsin Tables 7 and 7a were computed are presented in Appendices 5 and 6.[5] It will be noted that data on suit-

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[4]The p value of chi, computed from a four-fold distribution and utilizing one degree of freedom can be read directly from the normal probability table.

[5]The exact breakdown of the tables included in Appendices 5, 6, 7, and 8 in terms of which the chi-squaredsin Tables 7 and 7a were computed is given in Appendix 9. It should be noted in determining the number of degrees of freedom it was considered that the marginal totals were fixed.

TABLE 6

RELATIONSHIP BETWEEN INCIDENCE OF VISUAL DEFECT AND PASSING OR FAILING ELEMENTARY FLIGHT COURSE

	N	D.F.	X	P
Mesa	98	1	1.280	.20
Terrell	101	1	.616	.54
Miami	99	1	101	.92
Clewiston	94	1	.808	.42

TABLE 6a

RELATIONSHIP BETWEEN INCIDENCE OF VISUAL DEFECT AND PASSING OR FAILING ADVANCED FLIGHT COURSE

	N	D.F.	X	P
Mesa	93	1	.794	.43
Terrell	87	1	1.290	.20
Miami	88	1	1.254	.21
Clewiston	82	1	.891	.37

ability ratings were not available for the Miami elementary group, and that these data were not available for any of the advanced groups.[6]

Examination of Tables 7 and 7a indicate that there is little or no relationship between incidence of visual defect and the cadets' scores on the various criterion measures. This lack of relationship is evident in both elementary and advanced classes. In only one case did a chi-squared yield a p value lower than .05, i.e., "Link Trainer" at Mesa. However, for all other classes, elementary and advanced, the p value for the Link Trainer is well above the level of statistical significance. Considering the p values on all visual variables from both elementary and advanced distributions it is noteworthy that only 5 were less than .10, and that 59 of the 80 were greater than .20. In addition, reference to Appendices 5 and 6 will indicate that, in general, cases with multiple visual defects were distributed throughout the range of criterion scores, both in regard to elementary and advanced subjects. Moreover, although for purposes of statistical analysis various types of defects were pooled and treated without regard to their specific nature, inspection of Appendices 5 and 6 will also indicate that for both elementary and advanced subjects specific defects,

[6] Criterion data for this study were taken from the RAF training reports. (See Figure 1.) This information was not included on these reports for the above subjects.

TABLE 7

CHI-SQUARES AND P VALUES FOR CRITERION DISTRIBUTIONS (ELEMENTARY) IN TERMS OF VISUAL DEFECT

Criterion	MESA (N = 87)			TERRELL (N = 85)			MIAMI (N = 87)			CLEWISTON (N = 82)		
	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P
Flying Test	5	4.147	.53	5	.844	.96+	5	6.561	.26	5	3.749	.59
Ground Exam	5	8.623	.13	5	1.911	.86	5	4.835	.44	5	3.214	67
Character and Leadership	5	3.157	.68	5	8.408	.14	5	3.126	.68	5	3.979	.55
General	5	3.307	.65	5	3.368	.64	5	4.056	.54	3	.734	.80+
Instrument	5	4.439	.49	5	2.260	.81	5	2.489	.78	3	6.834	.08
Night	5	3.792	.58	5	6.265	.28	5	6.832	.24	3	2.280	.52
Link	5	11.966	.04	4	2.628	.62	3	5.519	.14	5	8.152	.15
Dual to 1st Solo (Day)	5	2.124	.83	5	7.522	.19	6	4.439	.62	5	1.073	95
Total Dual (Day)	5	.857	.96+	5	5.919	.32	6	9.394	.15	5	7.844	.17
Suitability ratings												
Highest rating	2	.099	.61	2	5.655	.06				2	3.199	.21
Suitability for												
Bomber	3	2.457	.49	3	3.492	.33				3	4.604	.21
Fighter	3	3.341	.35	3	3.618	.31				3	7.031	.07
Instructor	3	1.013	.80	3	1.694	.64				3	3.062	.38

TABLE 7a

CHI-SQUARES AND P VALUES FOR CRITERION DICHOTOMIES (ADVANCED) IN TERMS OF VISUAL DEFECT

Criterion	MESA (N = 71)			TERRELL (N = 74)			MIAMI (N = 77)			CLEWISTON (N = 63)		
	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P
Flying Test	5	7.952	.16	5	8.600	.13	5	4.732	.45	5	3.856	.57
Ground Exam	5	2.356	.80	5	4.206	.52	5	5.882	.32	5	4.366	.50
Perseverance and Leadership	5	1.407	.92	5	6.814	.24	5	8.598	.13	5	4.140	.53
General	4	4.741	.32	5	10.236	.07	5	3.270	.66	5	4.937	.42
Instrument	5	7.452	.19	5	3.553	.62	5	2.376	.79	5	8.978	.11
Navigation	4	.599	.91+	5	2.574	.76	5	5.120	.40	5	8.422	.14
Applied Flying	5	.617	.96+	3	1.525	.68	5	2.464	.78	5	7.521	.19
	5	4.625	.47	5	6.216	.29	5	2.623	.76	5	3.251	.66

e.g., in acuity, are distributed about the range of criterion scores and among passers and failers and that no trends or relationships between criterion score (or passing and failing) and incidence of defect are evident.

Relationship Between Cardiovascular Defect and Criteria. In Tables 8 and 8a are presented the values of Chi and the associated values for p resulting from the comparison of incidence of visual defect among subjects passing and failing the elementary and advanced flight courses, respectively, at the four schools. Inspection of these tables indicates that in only one instance (Terrell, advanced flight course) was the relationship between incidence of cardiovascular defect and pass-fail significant at as low as the .05 level. For the elementary course at Terrell, as well as in the case of both elementary and advanced flight courses at the other schools, with this one exception, the p values indicating relationship between cardiovascular defect and the Pass-Fail criterion were considerably above acceptable levels of statistical significance. It should be noted, however, (as reference to Table 4 will indicate) that defect cases at Mesa and Terrell were primarily in terms of high systolic pressure, and at Clewiston, primarily in terms of low systolic pressure. Few cases of high diastolic pressure were evident, 4 of the 7 such cases occurring at Miami.

In Tables 9 and 9a are presented the chi-squareds and associated p values which indicate the relationship between incidence of cardiovascular defect with regard to scores on a number of criterion measures. The original distributions from which these chi-squareds were computed are presented in Appendices 7 and 8. It should be noted, as in the case of visual defect, that the data in these tables are based only on subjects who passed the respective flight training courses, in as much as detailed criterion information were not available for the failers. Again, data on suitability ratings were not available for the Miami elementary group, or for any of the advanced subjects.

Examination of the distributions of p values in Tables 9 and 9a indicates that, in general, no significant relationships exist between incidence of cardiovascular defect and scores on the various criterion elements. Only one chi-squared ("Suitability for Bomber" at Terrell) yielded a p value of less than .05, the p value in this case being .01. At all other schools for which suitability data are available, however, the p value for "Suitability for Bomber" is above acceptable levels of statistical significance. The lack of significant relationships between cardiovascular variables and the criterion elements is indicated by the fact that only 4 p values were less than .10, while 68 of the 80 p values were greater than .20.

As in the case of visual defect, for purposes of statistical analysis, various types of defects were pooled and treated without regard to their specific nature. Nevertheless, inspection of Appendices 7 and 8 indicates that for both elementary and advanced subjects, specific defects, e.g., high

TABLE 8

RELATIONSHIP BETWEEN INCIDENCE OF CARDIOVASCULAR DEFECT AND PASSING OR FAILING ELEMENTARY FLIGHT COURSE

	N	D.F.	X	P
Mesa	98	1	1.173	.24
Terrell	101	1	1.074	.28
Miami	99	1	1.512	.13
Clewiston	94	1	.035	.97

TABLE 8a

RELATIONSHIP BETWEEN INCIDENCE OF VARDIOVASCULAR DEFECT AND PASSING OR FAILING ADVANCED FLIGHT COURSE

	N	D.F.	X	P
Mesa	93	1	.521	.61
Terrell	87	1	1.963	.05
Miami	88	1	.529	.60
Clewiston	82	1	1.421	.16

systolic pressure, are distributed throughout the range of criterion scores and among passers and failers, and that no trends or relationship between criterion score (or passing and failing) and incidence of defect are evident.

Distribution of P values for all Visual and Cardiovascular Variables. A clearer picture of the general lack of relationships between visual and cardiovascular defects and the criteria of flight proficiency (with the exception of Pass-Fail) can be obtained by examining the distributions of p values from all the defect-criteria comparisons. These distributions for visual and cardiovascular defects separately and for the combined distribution are given in Table 10. It will be noted that in addition, the distribution of p values of .10 and less are incorporated in this table.

It is evident that even if there were no "true" relationship between any of the visual and cardiovascular defects and any of the criterion measures, a certain number of statistically significant p values could be expected to arise by chance, i.e., 10 per cent of the p values could be expected to fall below the .10 level of significance, 10 per cent between the .10 and .20 levels, etc. In regard to the distributions of visual and cardiovascular defects, respectively, by chance one could expect 8 p values to fall in each 10 point range, i.e., 8 p values between the .00 and .10 levels, 8 p values between the .10 and .20 levels, etc.

Examination of Table 10 indicates that while there are somewhat fewer extremely low and extremely high p values (.10 or less or greater than .90)

TABLE 9

CHI-SQUAREDS AND P VALUES FOR CARDIOVASCULAR (ELEMENTARY) IN TERMS OF VISUAL DEFECT

	MESA (N = 87)			TERRELL (N = 85)			Miami (N = 87)			CLEMISTON (N = 82)		
Criterion	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P
Flying Test	5	9.233	.10	5	2.614	.76	5	2.601	.76	5	3.582	.61
Ground Exam	5	6.050	.30	5	7.566	.18	5	3.935	.56	5	5.636	.35
Character and Leadership	5	4.023	.55	5	2.874	.72	5	2.168	.82	5	4.692	.46
General	5	4.308	.51	5	2.963	.71	5	6.442	.27	3	.232	.80+
Instrument	5	3.307	.65	5	2.333	.80	5	4.712	.45	3	2.787	.43
Night	5	2.018	.85	5	4.995	.42	5	7.076	.22	3	1.847	.61
Link	5	4.198	.52	4	5.948	.20	3	.827	.80+	5	5.783	.33
Dual to 1st Solo (Day)	5	4.615	.47	5	3.721	.59	6	6.332	.39	5	8.143	.15
Total Dual (Day)	5	3.311	.65	5	8.502	.13	6	6.532	.37	5	5.932	.31
Suitability ratings												
Highest rating	2	.575	.61+	2	2.200	.34				2	.399	.61
Suitability for												
Bomber	3	3.624	.31	3	12.029	.01				3	5.779	.12
Fighter	3	3.256	.36	3	1.480	.69				3	4.085	.25
Instructor	3	2.738	.44	3	2.934	.40				3	.233	.80+

TABLE 9a

CHI-SQUAREDS AND P VALUES FOR CARDIOVASCULAR (ADVANCED) IN TERMS OF VISUAL DEFECT

	MESA (N = 71)			TERRELL (N = 74)			MIAMI (N = 77)			CLEWISTON (N = 63)		
Criterion	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P	D.F.	X^2	P
Flying Test	5	6.625	.25	5	17.243	.00	5	7.524	.19	5	2.427	.79
Ground Exam	5	6.935	.23	5	4.516	.48	5	4.083	.54	5	5.415	.37
Character and Leadership	5	4.024	.55	5	4.019	.55	5	6.405	.27	5	2.222	.82
General	4	3.878	.42	5	.870	.96+	5	6.652	.25	5	5.242	.39
Instrument	5	3.153	.68	5	3.121	.68	5	5.450	.37	5	3.788	.58
Night	4	7.641	.11	5	.746	.96+	5	5.187	.40	5	2.276	.81
Link	5	7.853	.17	3	.838	.80+	5	1.405	.92	5	9.887	.08
Applied Flying	5	6.096	.30	5	5.604	.35	5	2.535	.77	5	11.774	.04

TABLE 10

PROBABILITIES OF DEFECT AND CLEAR CASES BELONGING TO THE SAME UNIVERSE IN 80 SITUATIONS

(The 80 situations consist of 1 school elementary class, 9 criteria; 3 school elementary classes, 13 criteria; 4 school advanced classes, 8 criteria)

P	Vision Frequency	Cardiovascular Frequency	Total Frequency
0-10	5	4	9
10-20	14	8	22
20-30	7	8	15
30-40	8	14	22
40-50	7	10	17
50-60	8	9	17
60-70	15	9	24
70-80	4	6	10
80-90	6	9	15
90-100	6	3	9
Total	80	80	160

DISTRIBUTION OF P VALUES OF .10 AND LOWER

.01		2
.02		
.03		
.04	1	1
.05		
.06	1	
.07	2	
.08	1	1
.09		
.10		

than might be expected by chance this perhaps can be accounted for by the fact that some of the variables are positively correlated. In any event, it is clear that the distributions are, in general, rectangular, and reveal nothing to indicate any significant relationships between either visual or cardiovascular defect and the criteria. The distribution of p values of .10 and below are presented in order to demonstrate that the values of .10 and below are not so low (e.g., below .01) as to be accounted for by other than chance distribution.

Distribution of Defects in Terms of Flight Test Rating. In addition to the treatment discussed above a further step was taken in the ahalysis of the defect cases. The cases with visual and cardiovascular defect, at

each of the respective schools, were ranked in order of their flight test ratings. In terms of this rank order on the measure of flight proficiency, tabulations were made of the physiological measures obtained on these defect cases, i.e., the distributions of physiological measures of cases with cardiovascular or visual defect were tabulated in order of their flying test rating (from low to high). Although these data were not analyzed statistically, inspection of the distributions indicated no relationships between flight test ratings and physiological measures for these defect cases. Examples of distributions for cases with cardiovascular and visual defect, respectively, at Clewiston are presented in Appendix 10.[7]

RESULTS OF SUPPLEMENTARY ANALYSIS

As noted previously, on the basis of the criterion data obtained in connection with the principal analysis, a supplementary investigation of the interrelationships between certain of the criterion measures were carried out. In Table 11 are given the intercorrelations between ratings of elementary students at the four schools on various aspects of the flying test. Because of the fact that the magnitude of the coefficients for the several pairs of intercorrelated variables vary considerably from school to school, both in absolute and relative terms, it is possible only to summarize the relationships in somewhat general terms. Inspection of the intercorrelations from all four schools given in Table 11 indicates that the variable "General Flying" for the most part correlates highest with the other criterion variables, particularly "Instrument Flying" and "Night Flying." The remaining intercorrelation coefficients are somewhat lower and, in general, do not exceed three standard deviations of a correlation coefficient of zero.

Intercorrelation of Advanced Flight Ratings. In Table 12 are given the intercorrelations between ratings on the 5 variables available for advanced students at the four schools. (It will be noted that ratings on the variable "Applied Flying" were not made for the elementary students.) The trend of these intercorrelations is similar to those for the elementary students with the exception of the variable "Applied Flying" which in all four schools correlates relatively high with ratings on "Night Flying" over the four schools.

Correlations Between Flight Ratings During Elementary and Advanced Training. The coefficients in Table 12 which are enclosed by parentheses represent the correlation between ratings on the same subjects in the elementary and advanced courses. It is noteworthy that the correlations between elementary and advanced ratings on "General Flying," "Instrument Flying," and "Night Flying," respectively, for the four schools are, in general, low, and in some cases low and negative. The correlations between elemen-

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[7]Distributions for all schools are on file in the Office of the Chairman, Committee on Selection and Training of Aircraft Pilots.

TABLE 11

INTERCORRELATIONS OF ELEMENTARY RATINGS (MARKS OBTAINED) BY SCHOOLS

	General	Instrument	Night	Link
MESA, ARIZONA (N = 87) σ_{r_o} = .11				
General Flying				
Instrument	.58			
Night	.59	.28		
Link	.31	.11	.39	
TERRELL, TEXAS (N = 85) σ_{r_o} = .11				
General Flying				
Instrument	.37			
Night	.43	.28		
Link	.21	.30	.13	
MIAMI, OKLAHOMA (N = 87) σ_{r_o} = .11				
General Flying				
Instrument	.18			
Night	.43	.12		
Link	.28	.16	.20	
CLEWISTON, FLORIDA (N = 82) σ_{r_o} = .11				
General Flying				
Instrument	.74			
Night	.71	.73		
Link	.29	.23	.22	

tary and advanced ratings on "Link Trainer" are, on the other hand, consistently higher, varying at the four schools between .37 and .60. This might suggest that the ratings on Link Trainer performance were more reliable than were the evaluations in terms of other criterion elements, although no specific information on this point is available.

Intercorrelations of Elementary and Advanced Ranks (Orders of Merit) from Marks Obtained. For each cadet an "order of merit" was obtained from the marks obtained by the cadet in the "Flying Test," "Ground Examination," and on "Character and Leadership." As noted previously, the marks obtained on "Flying Test" and "Ground Examination" represented the summation of marks given to various aspects in terms of which these broad variables were broken down. In Table 13 are presented the intercorrelations between the orders of merit for elementary cadets at the four schools in terms of "Flying Test,"

TABLE 12

INTERCORRELATIONS OF ADVANCED RATINGS
(MARKS OBTAINED) BY SCHOOLS

Correlations in parentheses represent the relation between elementary and advanced for each type of rating.

	General	Instrument	Night	Link
MESA, ARIZONA (N = 71) σ_{r_0} = .12				
General Flying	(.45)			
Instrument	.71	(.22)		
Night	.60	.51	(.31)	
Link	-.02	.11	-.02	(.50)
Applied Flying	.44	.38	.50	-.12
TERRELL, TEXAS (N = 74) σ_{r_0} = .12				
General Flying	(.08)			
Instrument	.01	(-.05)		
Night	.28	-.04	(.07)	
Link	.22	.04	.25	(.60)
Applied Flying	.31	-.08	.51	.34
MIAMI, OKLAHOMA (N = 77) σ_{r_0} = .11				
General Flying	(-.10)			
Instrument	.09	(.12)		
Night	.21	.30	(.32)	
Link	.08	.14	.42	(.37)
Applied Flying	.28	.16	.56	.40
CLEWISTON, FLORIDA (N = 63) σ_{r_0} = .13				
General Flying	(.22)			
Instrument	.36	(-.15)		
Night	.39	.06	(.25)	
Link	.31	.22	.38	(.60)
Applied Flying	.18	-.02	.35	.21

"Ground Examination," and "Character and Leadership."[8] It will be noted that the intercorrelations are, in general, low, only one being greater

[8]Although the correlations in Table 13 represent Pearson coefficients, in as much as ranked data were used the standard error for rank order coefficient of zero has been used to evaluate the coefficients.

TABLE 13

INTERCORRELATIONS OF ELEMENTARY RANKS (ORDER OF MERIT FROM MARKS OBTAINED) BY SCHOOLS

	Flying Test	Ground Exam	Character and Leadership
MESA, ARIZONA (N = 87) σ_{ρ_0} = .12			
Flying Test			
Ground Exam	-.12		
Character and Leadership	.00	.20	
TERRELL, TEXAS (N = 85) σ_{ρ_0} = .12			
Flying Test			
Ground Exam	.17		
Character and Leadership	.35	.03	
MIAMI, OKLAHOMA (N = 87) σ_{ρ_0} = .12			
Flying Test			
Ground Exam	.13		
Character and Leadership	.03	.00	
CLEWISTON, FLORIDA (N = 82) σ_{ρ_0} = .12			
Flying Test			
Ground Exam	.09		
Character and Leadership	-.03	.18	

than .20 and that except for this lack of relationship between the variables, no general trends over the four schools are apparent. In Table 14 are presented the intercorrelations between these variables for advanced cadets at the four schools. Inspection of this table indicates that while the intercorrelations are somewhat higher, in no case is the correlation between given pairs of variables three times as great as the standard error of a coefficient of zero. At three of the schools, however, there is some hint of a possibly significant positive relationship between "Flying Test" and "Ground Examination," the coefficients at these three schools (Terrell, Miami, and Clewiston) varying between .32 and .38. In contrast, markedly less relationship between these variables was found for the elementary cadets.

Correlations Between Orders of Merit During Elementary and Advanced Training. The coefficients in Table 14 which are enclosed by parentheses represent the correlation between "orders of merit" for cadets during elementary and advanced training. It will be noted that the correlations

TABLE 14

INTERCORRELATIONS OF ADVANCED RANKS (ORDER OF MERIT FROM MARKS OBTAINED) BY SCHOOLS

Correlations in parentheses represent the relation between elementary and advanced for each type of ranking.

	Flying Test	Ground Exam	Character and Leadership
MESA, ARIZONA (N = 71) σ_{r_0} = .13			
Flying Test	(.42)		
Ground Exam	.12	(.76)	
Character and Leadership	.08	.39	(.50)
TERRELL, TEXAS (N = 74) σ_{r_0} = .13			
Flying Test	(.02)		
Ground Exam	.32	(.66)	
Character and Leadership	.19	.25	(.40)
MIAMI, OKLAHOMA (N = 77) σ_{r_0} = .12			
Flying Test	(.20)		
Ground Exam	.38	(.76)	
Character and Leadership	.17	.35	(.52)
CLEWISTON, FLORIDA (N = 63) σ_{r_0} = .14			
Flying Test	(.21)		
Ground Exam	.38	(.72)	
Character and Leadership	.12	.21	(.74)

between elementary and advanced "orders of merit" in terms of flight training (Flying Test) are in general, not high. Comparison of this table with the coefficients enclosed in parenthesis on Table 12 indicates that in no case does the correlation between elementary and advanced orders of merit in terms of "Flying Test" exceed the highest correlation between elementary and advanced ratings on the individual elements (General Flying, Instrument Flying, Night Flying, and Link Trainer) which contributed to the total "Flying Test" score from which the order of merit was obtained. In only one case does the correlation between elementary and advanced orders of merit in terms of "Flying Test" exceed the correlation between elementary and advanced ratings on "General Flying" which was the most heavily weighted element. In contrast, the correlations between elementary and advanced orders of merit in terms of "Ground Examination" and "Character and Leadership" are markedly higher, the coefficients in the former case ranging from .66 to .76 at the four schools, and in the latter from .40 to .74.

TABLE 15

INTERCORRELATIONS OF ELEMENTARY TIME OF DAY INSTRUCTION (FLYING TIME) BY SCHOOLS

	Dual to 1st Solo	Total Dual
MESA, ARIZONA (N = 87)		
Total Dual	.07	
Solo	-.23	-.48
TERRELL, TEXAS (N = 85)		
Total Dual	.38	
Solo	-.40	-.69
MIAMI, OKLAHOMA (N = 87)		
Total Dual	.42	
Solo	-.39	-.98
CLEWISTON, FLORIDA (N = 82)		
Total Dual	.33	
Solo	-.35	-.95

Intercorrelations Between "Time" Variables for Elementary Cadets. Time measures available on elementary cadets were Dual Time preceding first solo flight, Total Dual Time during the course, and Total Solo Time during the course. Intercorrelations between these time variables for day instruction are presented in Table 15. It will be noted that there is a positive relationship between Total Dual Time and Dual to 1st Solo, the coefficients at three of the four schools varying between .33 and .42, with the correlation at Mesa being lower (.07). It should be emphasized, however, that these variables are not independent, Dual Time to 1st Solo being included in Total Dual Time. In view of the fact that there were certain limitations on the length of the course, the negative correlations between Dual to 1st Solo, and Total Solo Time, and between Total Solo Time and Total Dual Time can be accounted for by the fact that the more time spent in dual training, the less time was available for solo flight, if the course was to be completed within reasonable limits.

In Table 16 are presented the intercorrelations between the above "Time" variables for night instruction. The correlations between Dual to 1st Solo and Total Dual are somewhat higher, whereas the correlations between Total Dual and Total Solo, while negative, are somewhat lower than for day instruction. However, the same general relationships are apparent as were found for day instruction.

TABLE 16

INTERCORRELATIONS OF ELEMENTARY TIME OF NIGHT INSTRUCTION (FLYING TIME) BY SCHOOLS

	Dual to 1st Solo	Total Dual
MESA, ARIZONA (N = 87)		
Total Dual	.47	
Solo	-.15	-.43
TERRELL, TEXAS (N = 87)		
Total Dual	.45	
Solo	-.42	-.86
MIAMI, OKLAHOMA (N = 87)		
Total Dual	.53	
Solo	-.66	-.72
CLEWISTON, FLORIDA (N = 87)		
Total Dual	.69	
Solo	-.31	-.59

DISCUSSION

In evaluating the results of this study it should be recognized that as far as visual factors are concerned, the implications of the investigation are primarily in reference to the variables Acuity, Depth Perception, and Accommodation, in as much as conclusions cannot be drawn regarding the relationships between criteria of flight performance and measures of the Phorias, Prism Divergence, and Angle of Convergence. As mentioned previously, reference to Table 4 and to Appendix 4 indicates that there were no defect cases in terms of Angle of Convergence, relatively few in terms of the Phorias, and with the exception of subjects training at Terrell, Texas, where the distribution for Prism Divergence was decidedly atypical, few defects occurred in terms of Prism Divergence, only one such defect being evident among subjects at the other three schools. Because of the low number of defect cases in terms of these variables, generalizations regarding the relationship between these defects and flight proficiency are not warranted. Furthermore, at the four schools only seven subjects exhibited sufficiently high diastolic blood pressure to be considered disqualified in terms of the standards as defined, four of these defect cases occurring at one school. Therefore, systolic blood pressure represents the primary cardiovascular variable under investigation.

Granting these limitations this investigation can be considered to demonstrate the complete lack of significant relationship between visual defect in Acuity, Depth Perception, or Accommodation (as defined by the standards used) and measures of flight proficiency on four independent samples of flight cadets. Similarly, no significant relationships between cardiovascular defect as defined in this report (primarily systolic blood pressure) and criteria of flight performance were evident. In regard to cardiovascular defect, it should be noted, however, that this lack of relationship cannot be considered to apply to specific cardiovascular variables over all four samples, in as much as all defects at one school were in terms of low systolic pressure, whereas at two other schools defect cases were almost entirely in terms of high systolic blood pressure.

It is evident, of course, that the results of this study confirm the results of an earlier investigation, on RAF cadets, summarized in the introduction to this report.[9] Although an extensive survey of the literature will not be presented, in view of the negative findings of this and the previous investigation, consideration should be given to the results of other pertinent studies. In a research conducted by the Royal Australian Air Force[10] on a sample of 483 trainees in initial flight training a statistically significant relationship between decrease in flight proficiency and decrease in visual acuity was demonstrated, the effect of age being held constant. Although having important implications as far as the results of the present investigation are concerned, this study cannot be considered to negate the results of the present investigation, in as much as the range of defect was greater in the Australian study and the number of cases with marked visual defect also was greater. As noted previously the visual acuity of only one subject in the present study was less than 20/30 corrected.

In another study conducted for the Royal Canadian Air Force[11] it was demonstrated that refractive error, specifically myopia, had a serious effect on flight performance, the flight performance of myopic subjects being significantly poorer than that of normals. Again, however, these results are not in contradiction to the results of the present investigation, in as much as in the Canadian study it was concluded that the critical level was apparently 20/40 in the worse eye. In the present study there was an insufficient number of cases having this degree of defect to render the investigations at all comparable. In the Canadian study, defects in hyperophoria and convergence insufficiency were also found significantly related to flight performance. Again, however, the paucity of such defects in the present data allow no comparisons of the studies to be made in these terms.

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[9] Brimhall, Dean R., and Franzen, Raymond. Op. cit.

[10] S/Ldr. Ryan. The relationship between visual acuity and flying ability. Report to the Flying Personnel Research Committee, Royal Australian Air Force.

[11] Proceedings of fifteenth meeting of the Associate Committee on Aviation Medical Research, National Research Council of Canada, p. 175.

Although no studies on the specific cardiovascular variables dealt with in this report are in evidence, results of related studies are, in general, negative, and thus confirm the results of the present investigation. It has been demonstrated, for example, that such measures of physical fitness as the Schneider Index and the "Pack Test" bear little relationship to success in flight training.[12]

Although on the basis of the present study lack of relationship has been demonstrated between flight criteria and visual and cardiovascular defect defined in terms of the specific standards presented, it should be emphasized that the criteria used in this investigation were measures of success in flight training, and represented criteria of flight proficiency obtained under relatively more safe and relatively less rigorous conditions than are encountered in operational or combat flying. It cannot, therefore, be concluded that the incidence of visual and cardiovascular defect would similarly be unrelated to success or failure in meeting the stress and rigors of operational or combat flying. Although there is some evidence that the Schneider Index is of little value in predicting whether or not a given flier will undergo significant cardiovascular changes during combat flying[13] nevertheless it cannot be assumed that the visual and cardiovascular qualifications necessary for success in flight training are as high as those required for operational and combat flying. In regard to cardiovascular qualifications, the late Cdr. Eric Liljencrantz has stated "A high degree of cardiovascular fitness is essential to withstand the rigors of service flight. Naval aviators are called upon for but little actual physical work. Nonetheless, the cardiovascular performance required of them and the physical fitness required of athlethes appear to have much in common."[14]

Nevertheless, the results of the present study, particularly when considered in light of the results of the previous investigation on RAF flight cadets, clearly indicate that as far as ability to succeed in flight training are concerned the standards established for the purposes of this investigation, which are generally the same as the standards for flight training in the United States Army or Navy[15] are unnecessarily stringent as regards

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[12]See, for example: Graybiel, A., and West, H. The relationship between physical fitness and success in training of U. S. Naval Flight Students. Summary reported in BuMed News Letter, Aviation Supplement, Vol. 4, No. 7, 30 March 1945, pp. 6-7; Report No. 1 from Project 190, AAF School of Aviation Medicine, Validity of the Schneider Index for predicting success in primary flight training. October 19, 1945

[13]Kirsch, Ralph E. (MC) USN, Physiological study of aviators during combat flying. BuMed News Letter, No. 13, Vol. No. 3, 22 December 1944.

[14]Liljencrantz, Eric. Problems in the selection of Aviators. J. Aviat. Med., 13, 1942, pp. 107-120.

[15]The standards for acuity and accommodation in the two services are identical, and the cardiovascular qualifications are essentially the same. The requirements in terms of the test for Depth Perception, however, are slightly more lenient in the Army Air Corps than in the Navy. (See Table 2.)

Visual Acuity, Depth Perception, Accommodation, and Systolic Blood Pressure. Although the range of data was not sufficient to yield definitive information regarding the level of defect which does affect flight proficiency adversely, and although generalizations cannot be made regarding the important issue of the visual and cardiovascular qualifications necessary to meet the rigors of operational or combat flying, on the basis of these findings the direction which future research should take seems clearly defined, viz.:

1. Through intentional admission to military flight training of men who would be disqualified under the present standards, the minimum physical qualifications for success in flight training should be determined.

2. Of more practical importance, through intensive research the relationship between physical defect and the ability to withstand the stress and strains of operational flying should be determined, and physical qualifications established in terms of such experimental investigation.

In the recent emergency the pool of potential pilots was large. If, in connection with some future exigency, the pool of applicants for flight training should become relatively smaller in comparison with the demand for pilots, the problem of the validity of physical standards in terms of which applicants for military flight training are eliminated will become more acute. This fact demands that such physical standards be set in terms of experimental investigation of their relationship to success or failure in operational flying, rather than being established arbitrarily and without such analysis.

It should be noted that the present study has few implications as far as private civilian flying is concerned, in as much as very few of the defect cases as defined by the standards employed would have been disqualified on the basis of the present physical examination for the private pilot.[16] However, the implications regarding the physical qualifications for the commercial license are not dissimilar to those applying to military aviation.

In regard to the supplementary analyses, it will be recalled that with the exception of the Time measures, which were not independent, the intercorrelations between criteria were low. It should be recognized that the unreliability of certain of these measures may have attenuated the coefficients, although other investigations have demonstrated that the relationship between flight proficiency and other aspects of flight training, such as ground school grades, is not high.[17]

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[16] With particular reference to private aviation, an experimental investigation of the relationship between visual defect and flight proficiency in which subjects with marked visual handicap as well as visual normals are utilized, is now in progress under the auspices of the National Research Council Committee on Selection and Training of Aircraft Pilots.

[17] See: National Research Council Committee on Selection and Training of Aircraft Pilots. Report on the Boston-Midwest project. Washington, D.C.: CAA Division of Research, Report No. 52, November 1945.

It should also be noted that the correlations between scores on the same criterion variable taken in elementary and advanced training were also, in general, not high. The most striking exceptions to this trend were the correlations between elementary and advanced ratings on the Link Trainer and in terms of "Character and Leadership." The lack of relationship between measures of flight proficiency in successive courses, which has been observed in other studies may be due in some degree to unreliability of the criterion measures.

SUMMARY AND CONCLUSIONS

The primary purpose of this investigation was to determine if there were significant relationships between visual and cardiovascular defects and success in flight training measured in terms of a number of criteria. Visual and cardiovascular defects were defined in accordance with the regulations of the Army and Navy air services. The investigation was conducted on four samples of RAF cadets in training at four centers in the United States and performance in the elementary and advanced training courses was studied. Since the RAF visual and cardiovascular standards are less stringent than those of the United States services, it was possible to investigate the flight proficiency of cadets who fell below the American standards.

Analysis of data from the four schools indicated that when data from all four schools were considered within the limits of the samples there were no significant relationships between the visual and cardiovascular defects investigated and criterion measures of proficiency in the flight training course. Although a few statistically significant chi-squareds were obtained, no consistent trends were evident over the four schools, and the distribution of chi-squareds was, in general, that expected on the basis of chance relationships only. Although no data are available bearing on the relationship of visual and cardiovascular defect to the ability to withstand the rigors of operational and combat flying, it is emphasized that the results of this study indicated that future research should be concentrated in this area. As far as success in flight training is concerned, it is apparent that the present standards are unnecessarily stringent.

An investigation of the relationship between criterion measures, conducted supplementary to the principal analysis, indicated that the individual criterion measures of flight proficiency, while positively related, were not intercorrelated to any marked degree. The correlations between the same measures taken in elementary and advanced flight courses similarly were not high with two exceptions. While the measures of flight proficiency taken during elementary and advanced training failed to show significant relationships, the measures of proficiency on the Link Trainer and particularly ratings on "Character and Leadership" proved to be significantly, and relatively, highly related when the correlations between ratings made during the elementary and advanced courses were examined.

APPENDIX 1

ANALYSIS OF CASES IN ADVANCED TRAINING AT THE FOUR SCHOOLS

APPENDIX I

ANALYSIS OF CASES IN ADVANCED
TRAINING AT THE FOUR SCHOOLS
(Advanced)

Analysis of Clewiston Cases

63 retained
17 eliminated (have medical records)
2 retained (no flight records)
1 retained (having a medical and flight record was omitted from distribution because pilot was not given a "Night" test during elementary course)
1 eliminated (no medical record)
2 eliminated (omitted - elementary data missing)
7 retained (no medical records)
2 retained (no medical and flight records)
2 retained (omitted - elementary data missing)

97 Total

Analysis of Terrell Cases

74 retained
7 eliminated (have medical records)
6 retained (no flight records)
1 retained (having a medical and flight record was omitted from the distribution because pilot's flight training record was missing from elementary data)
1 eliminated (no medical record)
6 retained (no medical records)

95 Total

Analysis of Miami Cases

77 retained
9 eliminated (have medical records)
2 retained (no flight records)
10 retained (no medical records)
1 retained (omitted - elementary data missing)

99 Total

Analysis of Mesa Cases

71 retained
10 eliminated (have medical records)
12 retained (no flight records)
1 eliminated (no medical record)
11 retained (no medical records)

105 Total

APPENDIX 2

CARDIOVASCULAR STANDARDS IN PHYSICAL EXAMINATION FOR FLYING

Excerpt from Army Regulations - No. 40-110, War Department - Washington, December 3, 1942

APPENDIX 2

CARDIOVASCULAR STANDARDS IN PHYSICAL EXAMINATION FOR FLYING

Excerpt from Army Regulations - No. 40-110, War Department - Washington, December 3, 1942

Blood Pressure. No examinee will be disqualified as the result of a single reading. When the blood pressure estimation at the first examination is regarded as abnormal, or in case of doubt, the procedure will be repeated (morning and afternoon) for a sufficient number of days to enable the examiner to arrive at a definite conclusion. When the blood pressure requires rechecking, this will be done with the applicant in a sitting position and all readings taken will be recorded. Systolic blood pressure, if examinee is 25 years of age or under, will not persistently exceed 140 millimeters. A low diastolic pressure will suggest the presence of aortic insufficiency. A diastolic pressure 95 millimeters or over in itself disqualifies. In the case of applicants for flying training, a persistent systolic blood pressure of 135 millimeters or more, or a persistent diastolic blood pressure of 90 millimeters or more, or an unstable blood pressure disqualifies.

APPENDIX 3

MEDICAL ELEMENTS EXCLUDED FROM STUDY

APPENDIX 3

MEDICAL ELEMENTS EXCLUDED FROM STUDY
(393 cases)

Element		Reason
3.	Temperature Vaccinations	No variance 308 unanswered
4.	Medical history	Too many combinations
5.	Eye inspection	367 normal
6.	Associated parallel movements, etc.	367 normal
10.	Red lens test	272 normal 94 unanswered
11.	Addition required for 50 cm., Jaeger type	367 unanswered
12.	Color vision	359 normal
13.	Field of vision	367 normal
14.	Refraction	362 unanswered
15.	Ear	101 none 170 unanswered
16.	External ear	104 normal 169 unanswered
17.	Hearing	368 unanswered
18.	Nares, etc.	101 normal 170 unanswered
19.	Teeth	273 unanswered
20.	History of swing, train, air, or sea sickness	363 none
21.	Barany chair	273 unanswered
22.	Posture, etc.	Good - 92 good, 172 unanswered Figure - 86 medium, 172 unanswered Fra e - 89 medium, 172 unanswered

MEDICAL ELEMENTS EXCLUDED FROM STUDY (Continued)
(393 cases)

Element		Reason
23.	Height	Insufficient variance
	Weight	Insufficient variance
	Chest	273 unanswered
24.	Skin and lymphatics, etc.	89 normal, 172 unanswered
25.	Bones, joints, muscles, etc.	93 normal, 172 unanswered
26.	Heart	100 normal, 172 unanswered
27.	Schneider	273 unanswered
	Character	364 full and regular and 4 unanswered
28.	Arteries, etc.	101 soft and compressible
		171 unanswered
29.	Respiratory system	102 normal, 171 unanswered
30.	X-ray of chest	273 unanswered
31.	Abdominal viscera	101 normal, 172 unanswered
32.	Hernia, etc.	101 none, 172 unanswered
33.	Genito-urinary system	93 normal, 172 unanswered
34.	Nervous system	101 normal, 172 unanswered
35.	Laboratory procedures:	
	Kahn	272 unanswered
	Wasserman	273 unanswered
	Reaction	81 acid, 172 unanswered
	Sp. gr.	Unanswered
	Albumin	101 negative, 172 unanswered
	Sugar	101 negative, 172 unanswered
	Microscopical	6 negative, 267 unanswered

APPENDIX 4

DISTRIBUTION OF SUBJECTS IN TERMS OF VISUAL AND CARDIOVASCULAR STANDARDS

APPENDIX 4

TABLE 1

DISTRIBUTION OF VISUAL ACUITY
(Retained Cases with Medical and Training Reports)

Visual Acuity* R. E.	L. E.	Mesa	Terrell	Miami	Clewiston
20/15	20/15	0	22	0	7
20/20	20/15	0	2	0	2
20/15	20/20	0	5	0	0
20/20	20/20	82	47	80	61
20/25	20/25	1	0	0	0
20/20	20/30	0	0	0	1
20/30	20/20	0	0	1	1
20/30	20/30	0	0	1	2
20/20	20/25 / 20/20	1	0	0	0
20/25 / 20/20	20/20	0	2	0	1
20/30 / 20/15	20/20	0	1	0	0
20/20	20/30 / 20/20	2	0	0	2
20/30 / 20/20	20/20	0	1	1	1
20/20	20/40 / 20/20	0	0	1	0
20/40 / 20/20	20/20	0	0	0	1
20/30 / 20/20	20/30 / 20/20	0	4	2	3
20/20 / 20/15	20/60 / 20/20	0	1	0	0
20/40 / 20/20	20/40 / 20/20	0	0	1	1
20/50 / 20/20	20/30 / 20/20	1	0	0	0
Total		87	85	87	83

*Where two measures appear the lower one is after correction

TABLE 1a

DISTRIBUTION OF VISUAL ACUITY
(Eliminated cases with medical report)

Visual Acuity* R. E.	L. E.	Mesa	Terrell	Miami	Clewiston
20/15	20/15	0	4	0	1
20/15	20/20	0	1	0	0
20/20	20/20	2	7	10	10
20/20	20/40 20/20	0	0	0	1
20/40 20/20	20/20	1	0	0	0
20/25 20/20	20/30 20/20	1	0	0	0
20/30 20/20	20/30 20/20	0	0	1	0
20/50 20/20	20/30 20/20	1	0	0	0
20/40	20/30	0	1	0	0
Total		5	13	11	12

*Where two measures appear the lower one is after correction

TABLE 2

DISTRIBUTION OF DEPTH PERCEPTION
(Retained Cases with Medical and Training Reports)

Depth Perception	Mesa	Terrell	Miami	Clewiston
0-5	21	8	13	7
6-10	16	9	17	18
11-15	13	24	21	22
16-20	10	24	9	8
21-25	9	8	15	15
26-30	17	7	10	10
34-35	0	0	2	0
60	0	0	0	1
5 corrected to 21	0	1	0	0
7 corrected to 0	0	1	0	0
19 corrected to 0	0	0	0	1
40 corrected to 15	1	0	0	0
42 corrected to 63	0	0	0	1
44 corrected to 22	0	1	0	0
57 corrected to 17	0	1	0	0
62 corrected to 27	0	1	0	0
Total	87	85	87	83

(Eliminated Cases with Medical Reports)

1-5	0	1	0	3
6-10	2	1	3	2
11-15	0	7	1	0
16-20	2	1	2	3
21-25	0	1	4	
26-30	0	1	1	1
35	0	0	0	1
45	0	0	0	1
50	0	0	0	1
52	0	1	0	0
60	1	0	0	0
Total	5	13	11	12

TABLE 3

HETEROPHORIA AT 6 METERS

Exo	Mesa	Terrell	Miami	Clewiston
	Distribution of Esophoria (Retained Cases with Medical and Training Reports)			
0	81	50	48	45
1	6	12	4	13
2	0	14	13	14
3	0	3	10	7
4	0	4	7	3
5	0	0	1	1
6	0	2	2	0
7	0	0	1	0
12	0	0	1	0
Total	87	85	87	83
	(Eliminated Cases with Medical Report)			
0	4	8	9	4
1	1	3	0	3
2	0	1	0	2
3	0	0	1	1
4	0	1	1	1
6	0	0	0	1
Total	5	13	11	12
	Distribution of Exophoria (Retained Cases with Medical and Training Reports)			
0	81	73	77	64
1	2	7	0	10
2	0	5	8	7
3	1	0	2	2
4	3	0	0	0
Total	87	85	87	83

TABLE 3 (Continued)

HETEROPHORIA AT 6 METERS

	Mesa	Terrell	Miami	Clewiston
	Distribution of Exophoria (Continued) (Eliminated Cases with Medical Report)			
Exo				
0	4	9	10	9
1	1	3	0	2
2	0	1	1	0
4	0	0	0	1
Total	5	13	11	12
	Distribution of Hyperphoria (Retained and Eliminated Cases)			
Rt. Hyper.				
0	92	98	98	88
1	0	0	0	7
Total	92	98	98	95
Lt. Hyper.				
0	92	94	98	95
1	0	4	0	0
Total	92	98	98	95

TABLE 4

DISTRIBUTION OF PRISM DIVERGENCE
(Retained Cases with Medical and Training Reports)

Prism Divergence	Mesa	Terrell	Miami	Clewiston
3	0	0	13	5
4	24	15	33	16
5	34	10	25	20
6	27	18	14	20
7	1	5	1	8
8	1	13	0	12
9	0	3	1	2
10	0	5	0	0
11	0	1	0	0
12	0	7	0	0
13	0	1	0	0
14	0	6	0	0
15	0	1	0	0
Total	87	85	87	83
(Eliminated with Medical Report)				
3	0	0	2	0
4	0	2	4	5
5	3	1	3	2
6	2	1	2	1
7	0	3	0	1
8	0	1	0	2
9	0	1	0	0
10	0	1	0	1
12	0	2	0	0
14	0	1	0	0
Total	5	13	11	12

TABLE 5

DISTRIBUTION OF ANGLE OF CONVERGENCE
(Retained Cases with Medical and Training Reports)

Angle of Convergence* (In degrees)	Mesa	Terrell	Miami	Clewiston
40 - 44	1	0	6	0
45 - 49	1	1	12	6
50 - 54	10	2	21	12
55 - 59	21	4	15	22
60 - 64	13	14	13	19
65 - 69	18	13	11	13
70 - 74	12	20	5	6
75 - 79	5	13	4	5
80 - 84	6	13	0	0
85 - 89	0	4	0	0
90 - 94	0	1	0	0
Total	87	85	87	83
(Eliminated Cases with Medical Reports)				
40 - 44	0	0	2	0
45 - 49	1	0	2	0
50 - 54	0	1	2	0
55 - 59	1	2	3	7
60 - 64	0	0	1	3
65 - 69	2	2	1	2
70 - 74	1	4	0	0
75 - 79	0	1	0	0
80 - 84	0	3	0	0
Total	5	13	11	12

*Angle of Convergence = $\frac{1/2\ Pd \times 100}{PcB} + 3$

TABLE 6

CARDIOVASCULAR

Distribution of Systolic Blood Pressure
(Retained Cases with Medical and Training Reports)

Systolic	Mesa	Terrell	Miami	Clewiston
170-179	1	0	2	0
160-169	0	0	1	0
150-159	1	0	0	0
140-149	11	2	2	0
135-139	5	5	5	0
130-134	17	8	15	1
125-129	6	11	11	2
120-124	25	20	20	8
115-119	8	14	10	15
110-114	12	25	16	24
105-109	1	0	1	25
100-104	0	0	4	8
Total	87	85	87	83
(Eliminated Cases with Medical Reports)				
170-179	0	0	1	0
135-139	0	0	1	0
130-134	2	1	2	0
125-129	1	0	1	0
120-124	1	7	2	2
115-119	0	1	1	2
110-114	1	4	3	5
105-109	0	0	0	2
100-104	0	0	0	1
Total	5	13	11	12

TABLE 6a

CARDIOVASCULAR

Distribution of Diastolic Blood Pressure
(Retained Cases with Medical and Training Reports)

Diastolic	Muir	Terrell	Miami	Clewiston
85-89	1	0	1	1
80-84	11	4	20	5
75-79	3	11	14	8
70-74	26	42	42	28
65-69	12	20	5	24
60-64	32	8	5	17
55-59	1	0	0	0
50-54	1	0	0	0
Total	87	85	87	83
(Eliminated Cases with Medical Reports)				
90-100	0	0	4	0
80-84	1	0	2	2
75-79	0	1	1	0
70-74	2	5	4	5
65-69	0	4	0	2
60-64	2	3	0	2
50-54	0	0	0	1
Total	5	13	11	12

APPENDIX 5

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES IN TERMS OF ~~VISUAL DEFECT~~ DISTRIBUTIONS
(Elementary Students)

Appendix 5a: Clewiston, Florida
Appendix 5b: Miami, Oklahoma
Appendix 5c: Terrell, Texas
Appendix 5d: Mesa, Arizona

APPENDIX 5a

TABLE 1

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity B.O.	Visual Acuity L.E.	Depth Perception A.	Depth Perception N.	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.7	2		1					x				
-1.5	6	#	4			x		xx				
-1.3	5		1	x	x					x		
-1.1	2		2									
-1.0	8	#	4			x	x	xxx				
- .6	8	#	6		x							
- .3	3		3									
- .2	2		1					x				
- .1	4		0			x						
.1	4		3				x					
.2	12	#	8	xx	x			x	x	x		
.7	3		2									
.8	5		4	x								
1.1	9	#	6		xx					x		
1.5	3		2									
1.6	4	#	3		x			x				
1.8	2		1					x				
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 1 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Flying Test	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.7	2									
-1.5	6									
-1.3	5								x	
-1.1	2									
-1.0	8									
- .6	8					xx				
- .3	3									
- .2	2									
- .1	4						x		xx	
.1	4									
.2	12								x	
.7	3									
.8	5								x	
1.1	9									
1.5	3								x	
1.6	4								x	
1.8	2									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 2

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.
2.5	1		1									
2.2	1		1									
2.0	1	#	0	x				x				
1.8	1		1									
1.6	2		1						x			
1.4	2		1				x					
1.3	3		3									
1.1	2		1					x				
.9	3		1					x				
.7	6		4	x				x				
.5	6	#	2			x	x	xx				
.3	7	#	3	x	x			xx		x		
.1	7	#	3		xxx					x		
0	5		4							x		
- .2	5		3	x								
- .4	5	#	4			x		x				
- .6	5		4			x						
- .8	4		4									
-1.0	4	#	2		x							
-1.1	2		2									
-1.3	3		2									
-1.5	2		1									
-1.7	1		1									
-1.9	3		2					x				
-2.1	1		0		x							
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 2 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Link Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.5	1									
2.2	1									
2.0	1								x	
1.8	1									
1.6	2									
1.4	2									
1.3	3									
1.1	2									
.9	3								x	
.7	6									
.5	6								x	
.3	7								x	
.1	7								x	
0	5									
- .2	5								x	
- .4	5									
- .6	5									
- .8	4									
-1.0	4					x			x	
-1.1	2									
-1.3	3						x			
-1.5	2					x				
-1.7	1									
-1.9	3									
-2.1	1									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 3

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Day Total Dual		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Esp	Heterophoria at 6 meters Exp	R.H.	L.H.
2.3	1		0					x				
2.1	1		1									
2.0	2		1									
1.9	1		0									
1.8	1		1									
1.7	1		1									
1.6	1		0									
1.5	1		1									
1.4	1		1									
1.1	4		2	x								
1.0	3		2				x					
.9	1		1									
.7	1	#	0			x		x				
.6	1		0									
.4	3		2	x								
.3	4		4									
.2	7		6									
.1	7		6									
0	3		1			x		x				
-.1	4		1		x			xx				
-.2	6	#	2	x	x	x	x	xx		x		
-.3	3		3									
-.4	2		2									
-.5	2		0					x	x			
-.6	2		2									
-.7	2	#	0		xx							
-.8	1		0							x		
-.9	2		2									
-1.0	3	#	0		xx			xx				
-1.1	1		1									
-1.3	2		2									
-1.4	2		2									
-1.5	1		1									
-1.7	1		1									
-1.8	1		1									
-1.9	1	#	0	x						x		
-2.0	1		1									
-2.2	1		0									
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)

TABLE 3 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Day Total Dual	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.3	1									
2.1	1									
2.0	2								x	
1.9	1								x	
1.8	1									
1.7	1									
1.6	1								x	
1.5	1									
1.4	1									
1.1	4						x			
1.0	3									
.9	1									
.7	1									
.6	1								x	
.4	3									
.3	4									
.2	7								x	
.1	7								x	
0	3									
- .1	4									
- .2	6								x	
- .3	3									
- .4	2									
- .5	2									
- .6	2									
- .7	2					x				
- .8	1									
- .9	2									
-1.0	3									
-1.1	1									
-1.3	2									
-1.4	2									
-1.5	1									
-1 7	1									
-1.8	1									
-1.9	1									
-2.0	1									
-2.2	1					x				
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1	x								
Elimin.	12									

TABLE 4

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Day Dual to 1st Solo		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
6.7	1		1									
1.8	1		1									
1.5	1		0									
1.2	2		1					x				
1.0	2	#	0		x			xx				
.9	2		1									
.8	3		3									
.7	1		0				x					
.6	2		2									
.5	4		3	x								
.4	2		2									
.3	5	#	2		x	x						
.2	6		3				x					
.1	3		2		x							
0	6		3		x							
-.1	5		4					x				
-.2	7	#	3	x		xx		xx		x		
-.3	4		4									
-.4	4		1	x					x	x		
-.6	3		2					x				
-.7	2		2									
-.8	3		3									
-.9	2	#	0		x			x		x		
-1.0	6	#	4	x				xx				
-1.2	4		4									
-1.3	1		0		x							
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 4 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Day Dual to 1st Solo	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
6.7	1									
1.8	1									
1.5	1						x			
1.2	2									
1.0	2									
.9	2								x	
.8	3									
.7	1									
.6	2									
.5	4									
.4	2									
.3	5					x			x	
.2	6								xx	
.1	3									
0	6					x			x	
-.1	5									
-.2	7								x	
-.3	4									
-.4	4									
-.6	3									
-.7	2									
-.8	3									
-.9	2									
-1.0	6								x	
-1.2	4									
-1.3	1									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 5

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Clewiston, Florida*

	Suit-ability		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
3												
311	1		1									
321	1		1									
131	1		1									
231	3		3									
232	1		1									
213	1		0					x				
2												
200	3	#	2		x			x				
201	2		1									
210	7	#	4	xx	x			x		x		
211	12	#	5	x		x		xx	x	x		
212	4		2			x						
221	2		1					x				
120	4		3		x							
121	10		7		x			x				
122	5		3	x			x					
112	1	#	0			x		x				
1												
100	6	#	3		x			x				
101	5		5									
110	7		3				x	x				
111	2	#	1		x					x		
010	1		1									
001	2		2									
011	1		1									
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 5 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Clewiston, Florida

	Suitability	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
3										
311	1									
321	1									
131	1									
231	3									
232	1									
213	1									
2										
200	3									
201	2								x	
210	7								x	
211	12								xx	
212	4								x	
221	2									
120	4									
121	10								x	
122	5									
112	1									
1										
100	6					x			x	
101	5									
110	7					x	x			
111	2									
010	1									
001	2									
011	1									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 6

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Ground Exam Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Perception A	Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.8	2	#	0	x			x	x				
-1.7	3		2									
-1.6	2		1									
-1.5	2		2									
-1.4	1		1									
-1.2	2	#	1		x					x		
-1.1	2		2									
-1.0	3	#	2			x		x				
- .9	2	#	0			x		xx				
- .8	2		1									
- .7	3		3									
- .6	1	#	0	x						x		
- .5	3		1	x				x				
- .4	2		2									
- .3	3		3									
- .2	3		1					x				
- .1	2		2									
0	3		1		x					x		
.1	2		1		x							
.2	4		3	x								
.3	2		2									
.4	3		2									
.5	3	#	0		x		x	x	x			
.6	2		2									
.7	2		1									
.8	2		1			x						
.9	2		2									
1.0	2		2									
1.1	3		2		x							
1.2	3		2					x				
1.3	2		1					x				
1.4	3		2					x				
1.5	2		1									
1.6	2	#	1		x							
1.7	2		1									
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test

12 eliminated (have med. records)
6 eliminated (no med. records)
10 retained (no med. records)
111 total

TABLE 6 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Ground Exam Test	Prism Divergence	Angle of Convergence PoD.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.8	2								x	
-1.7	3								x	
-1.6	2								x	
-1.5	2									
-1.4	1									
-1.2	2									
-1.1	2									
-1.0	3									
- .9	2									
- .8	2								x	
- .7	3									
- .6	1									
- .5	3									
- .4	2									
- .3	3									
- .2	3								x	
- .1	2									
0	3									
.1	2									
.2	4									
.3	2									
.4	3								x	
.5	3									
.6	2									
.7	2								x	
.8	2									
.9	2									
1.0	2									
1.1	3									
1.2	3									
1.3	2									
1.4	3									
1.5	2						x			
1.6	2					x				
1.7	2					x				
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 7

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Character and Leadership		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.6	1	#	0			x		x				
-1.5	4		3									
-1.4	1		1									
-1.3	4		3									
-1.2	5	#	3	x			x	x				
-1.0	2		2									
- .9	2	#	1	x						x		
- .8	5		4		x							
- .6	3		1					x	x			
- .5	11	#	6		x		x			x		
0	2		2									
.1	1		1									
.2	6		4	x				x				
.4	10	#	3		xx	x		xxxx				
.8	2		1					x				
.9	3		3									
1.0	4		2	x	x							
1.2	1		1									
1.3	6		4			x		x				
1.5	2		1									
1.6	2	#	1		x					x		
1.7	3		2									
1.8	2		2									
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Character and Leadership	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.6	1									
-1.5	4								x	
-1.4	1									
-1.3	4								x	
-1.2	5								x	
-1.0	2									
- .9	2									
- .8	5									
- .6	3									
- .5	11					x	x		x	
0	2									
.1	1									
.2	6									
.4	10					x			x	
.8	2									
.9	3									
1.0	4									
1.2	1									
1.3	6									
1.5	2								x	
1.6	2									
1.7	3								x	
1.8	2									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 8

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "GENERAL TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.3	2		1					x				
1.5	13	#	7	x	x	x		x		x		
.8	18	#	12		x	x	x	xxx				
- .6	27	#	16	xx	xx	x		xx	x	x		
- .8	12	#	9	x	x					x		
-1.2	10	#	6		x		x	xx				
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 6 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "GENERAL TEST" DISTRIBUTION
Clewiston, Florida

S.S.	General Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.3	2									
1.5	13								x	
.8	18					xx				
.6	27						x		xxxx	
.8	12								x	
1 2	10								x	
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 9

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.
2.5	2		1					x				
1.9	2	#	0			x		xx				
1.3	13		6	x	x			xx		x		
1.2	1		0									
.4	24	#	16		x	xx	xx	xx				
- .6	16	#	13	x	x				x	x		
-1.0	15	#	10	xx	x			x		x		
-1.3	8	#	5		x			xx				
-1.8	1		0		x							
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 9 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Instrument Test	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.5	2									
1.9	2									
1.3	13						x		x	
1.2	1								x	
.4	24					xx			x	
- .6	16									
-1.0	15								xxx	
-1.3	8								x	
-1.8	1									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

TABLE 10

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "NIGHT TEST" DISTRIBUTION
Clewiston, Florida*

S.S.	Night Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.4	2		1					x				
1.6	1		0									
1.5	13	#	7	x	x	xx	x	x		x		
.5	26	#	15	x	xx	x	x	xxxx				
- .6	17	#	12	x	x				x	x		
- .9	16	#	11	x	x			xx		x		
-1.3	6	#	4		x			xx				
-1.8	1		1									
Total	82		51	4	6	3	2	10	1	3	0	0
Omitted	1		1									
Elimin.	12	#	6			x	xxx	x	x	x		

#One or more cases with multiple defect

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 10 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "NIGHT TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Night Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.4	2									
1.6	1								x	
1.0	13									
.5	26					xx			xx	
- .6	17						x		x	
- .9	16								xxx	
-1.3	6									
-1.8	1									
Total	82	0	0	0	0	2	1	0	7	0
Omitted	1									
Elimin.	12	x								

...DISTRIBUTION
...shown

S.S.	Day Total Duals		No Visual Defects	Visual Acuity Defects Both	L.E.	Hyperopia Perceptive A		Astigmatism Meridians R.H.	L.H.
3.2	1		1						
3.1	1		0						
2.4	1		1						
2.1	1		1						
2.0	1		1						
1.9	1		0		x				
1.7	2		2						
1.4	1		1						
1.2	2		2						
1.2	1		1						
1.1	1		0				x		
1.0	1		1						
.8	2		2						
.7	1		1						
.6	6		5				x		
.5	2		1	x					
.4	5	#	2				xx	x	
.3	1		1						
.2	2		1				x		
.1	2		1	x					
0	4		3				x		
-.1	5		3	x		x			
-.2	1		1						
-.3	5		3				x	x	
-.4	7		6				x		
-.5	3		2					x	
-.6	5	#	3	x			x		
-.7	6		4	x				x	
-.8	3		1				x	x	
-.9	2		2						
-1.0	3		3						
-1.1	3		3						
-1.3	1	#	0			x		x	
-1.4	1		1						
-1.5	1		1						
-1.9	1		1						
None	1		0				x		
Total	87		62	2	1	2	10	4	2	0	0
Elimin.	11	#	8	x			x				
Retained	1		1								

#One or more cases with multiple defect

*Miami cases = 87 retained — 10 retained (no medical records)
11 eliminated (have medical records) — 112 total
1 retained (no flight records)
3 eliminated (no medical records)

TABLE 11 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Day Total Dual	Prism Convergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or less Rt.	Both	Lt.
3.2	1									
3.1	1									
2.4	1									
2.1	1									
2.0	1									
1.9	1									
1.7	2									
1.4	1									
1.3	2									
1.2	1									
1.1	1									
1.0	1									
.8	2									
.7	1									
.6	6									
.5	2									
.4	5				x	x				
.3	1									
.2	2									
.1	2									
0	4									
- .1	5									
- .2	1									
- .3	5									
- .4	7									
- .5	3									
- .6	5						x			
- .7	6									
.8	3									
- .9	2									
-1.0	3									
1.1	3									
-1.3	1									
-1.4	1									
-1.5	1									
-1.9	1									
None	1									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 12

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Miami, Oklahoma*

S.S.	Day Dual to 1st Solo		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso A	Eso N	Exo	R.H.	L.H.
2.9	2		1			x							
2.4	1		0		x								
2.0	1		1										
1.8	1		1										
1.5	1		1										
1.4	1		0					x					
1.3	3		3										
1.2	4		3		x								
.9	4	#	3					x					
.8	3		3										
.7	2		1							x			
.6	2		1							x			
.4	4		3					x					
.3	2		1		x								
.2	6	#	3					xx			xx		
0	3		3										
-.1	4		3				x						
-.2	8		6		x				x				
-.3	6		3	x				x		x			
-.4	3		2					x					
-.5	1		1										
-.6	1		1										
-.7	2		2										
-.8	2		1										
-.9	3		2					x					
-1.0	1		1										
-1.1	2		2										
-1.2	2		2										
-1.3	8	#	6				x	x		x			
-1.5	3		2	x									
None	1		0					x					
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
12 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no defect records)
112 total

[illegible]

OCCURRENCE OF VISUAL DEFECTS IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Minot, Oklahoma*

S.S.	Day Dual to 1st Solo	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence PD.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.9	2									
2.4	1									
2.0	1									
1.8	1									
1.5	1									
1.4	1									
1.3	3									
1.2	4									
.9	4						x			
.8	3									
.7	2									
.6	2									
.4	4									
.3	2									
.2	6									
0	3									
-.1	4									
-.2	8									
-.3	6									
-.4	3									
-.5	1									
-.6	1									
-.7	2									
-.8	2				x					
-.9	3									
-1.0	1									
-1.1	2									
-1.2	2									
-1.3	8					x				
-1.5	3									
None	1									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 13

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "LINK TEST" DISTRIBUTION
Miami, Oklahoma*

S.E.	Link Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters A	Heterophoria at 6 meters N	Eso	Exo	R.H.	L.H.
1.8	5		2	x	x					x				
1.0	6		4					x		x				
.7	32	#	22	x			xx	xxxxxx		x				
-.1	9		9											
-.4	14	#	11					xx				xx		
-1.2	15		12		x			x		x				
-1.9	5		2		x	x			x					
-3.0	1		0		x									
Total	87		62	2	4	1	2	10	1	4	2	0	0	
Elimin.	11	#	8		x			x						
Retained	1		-											

#One or more cases with multiple defect

*Miami cases
87 retained
11 eliminated (have medical records)
1 retained (no flight records)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 13 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "LINK TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Link Test	Prism Divergence	Angle of Convergence FoR.	Fd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
1.8	5									
1.0	6									
.7	32				x		x			
- .1	9									
- .4	14					x				
-1.2	15									
-1.9	5									
-3.0	1									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 14

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "NIGHT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Night Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.4	1		1										
2.2	1		1										
2.1	1		1										
1.8	2		1					x					
1.6	1		1										
1.2	8		3	x				xxx		x			
1.1	3		2		x								
.9	1		1										
.6	8		7										
.5	1		1										
.4	2		2										
.2	1		1										
0	22	#	18		x		xx	x		x			
-.1	6		5					x					
-.2	2	#	1					x					
-.3	1		1										
-.4	1		0							x			
-.6	10		5	x		x		xx			x		
-.8	1		1										
-1.1	6		5						x				
-1.3	1		1										
-1.7	4	#	1		x			x		x	x		
-2.3	3		2		x								
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 14 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "NIGHT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Night Test	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.4	1									
2.2	1									
2.1	1									
1.8	2									
1.6	1									
1.2	8									
1.1	3									
.9	1									
.6	8				x					
.5	1									
.4	2									
.2	1									
0	22					x				
- .1	6									
- .2	2						x			
- .3	1									
- .4	1									
- .6	10									
- .8	1									
-1.1	6									
-1.3	1									
-1.7	4									
-2.3	3									
Total	**87**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**
Elimin.	**11**					xx				
Retained	**1**									

TABLE 15

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso A	Eso N	Exo	R.H.	L.H.
2.8	1		0	x									
2.2	2		1					x					
1.9	1		1										
1.6	2		1			x							
1.3	5		5										
1.0	5		5										
.7	9	#	4		x			xxx			x		
.4	11		9	x	x								
.1	10		8							x			
- .2	9	#	7					x		x	x		
- .5	11		8					xx	x				
- .8	9	#	6				x	xx		x			
-1.1	5		2		xx					x			
-1.4	3		2					x					
-1.7	2		1				x						
-2.0	1		1										
-3.2	1		1										
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 15 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Instrument Test	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.8	1									
2.2	2									
1.9	1									
1.6	2									
1.3	5									
1.0	5									
.7	9					x	x			
.4	11									
.1	10				x					
- .2	9									
- .5	11									
- .8	9									
-1.1	5									
-1.4	3									
-1.7	2									
-2.0	1									
-3.2	1									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 16

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Miami, Oklahoma*

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.2	1	#	0				x			x			
1.8	1		1										
1.7	2		2										
1.5	2		1					x					
1.4	3		1	x						x			
1.3	6	#	4	x				x					
1.1	3		3										
1.0	1		0										
.8	1		1										
.7	3		3										
.6	3		2					x					
.5	2		2										
.4	1		1										
.3	5		5										
.2	3		1					xx					
.1	5		5										
-.1	5		1		x	x				x	x		
-.2	2		2										
-.3	7		6				x						
-.4	1	#	0					x					
-.5	3		1					x	x				
-.6	3		2					x					
-.7	2	#	1					x			x		
-.9	5		4							x			
-1.0	2		2										
-1.1	5		4		x								
-1.3	4		3		x								
-1.4	1		1										
-1.5	1		1										
-1.7	2		1		x								
-1.8	1		1										
-2.6	1		0					x					
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE [illegible]

OCCURRENCE OF VISUAL DEFECT IN [illegible] OF THE "GENERAL TEST" DISTRIBUTION
Miami Oklahoma

S.S.	General Test	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.2	1									
1.8	1									
1.7	2									
1.5	2									
1.4	3									
1.3	6						x			
1.1	3									
1.0	1				x					
.8	1									
.7	3									
.6	3									
.5	2									
.4	1									
.3	5									
.2	3									
.1	5									
- .1	5									
- .2	2									
- .3	7									
- .4	1					x				
- .5	3									
- .6	3									
- .7	2									
- .9	5									
-1.0	2									
-1.1	5									
-1.3	4									
-1.4	1									
-1.5	1									
-1.7	2									
-1.8	1									
-2.6	1									
Total	**87**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**
Elimin.	**11**					xx				
Retained	**1**									

TABLE 17

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Miami, Oklahoma*

S.S.	Character and Leadership		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso A	Eso N	Exo	R.H.	L.H.
-1.6	1		1										
-1.5	5		2	x				x					
-1.3	5	#	3		x			x					
-1.1	11		8		xx				x				
- .6	8		7					x					
- .3	5		4				x						
- .1	12		10	x				x					
.4	9	#	6					xx		x			
.8	17	#	11		x		x	xx		xx			
1.4	6	#	4					xx			x		
1.7	6		5								x		
1.9	2		1			x							
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 17 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Character and Leadership	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.6	1									
-1.5	5				x					
-1.3	5					x				
-1.1	11									
- .6	8									
- .3	5									
- .1	12									
.4	9						x			
.6	17									
1.4	6									
1.7	6									
1.9	2									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 18

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Miami, Oklahoma*

S.S.	Ground Exam		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.8	1		1										
-1.7	3		2					x					
-1.6	2		0		x					x			
-1.5	2		1	x									
-1.4	2		2										
-1.3	3	#	2				x			x			
-1.2	3		3										
-1.1	3		2					x					
-1.0	3		2		x								
.9	1		0					x					
.8	2		1					x					
.7	4		4										
.6	2		2										
.5	3		1			x							
.4	2		2										
.3	1		1										
.2	3		1						x		x		
.1	2		2										
0	3		3										
.1	2		1				x						
.2	3		2	x									
3	2		1							x			
.4	3		2					x					
.5	3		1					x		x			
.6	2	#	1					x					
.7	4	#	2		x			x					
.8	2		2										
.9	2		2										
1.0	3		2		x								
1.1	2		2										
1.2	3		3										
1.3	3		2					x					
1.4	3		3										
1.5	2		2										
1.6	3	#	2					x			x		
Total	87		62	2	4	1	2	10	1	4	2	0	0
Elimin.	11		8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 18 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Ground Exam	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.8	1									
-1.7	3									
-1.6	2									
-1.5	2									
-1.4	2									
-1.3	3									
-1.2	3									
-1.1	3									
-1.0	3									
- .9	1									
- .8	2									
- .7	4									
- .6	2									
- .5	3				x					
- .4	2									
- .3	1									
- .2	3									
- .1	2									
0	3									
.1	2									
.2	3									
.3	2									
.4	3									
.5	3									
.6	2						x			
.7	4					x				
.8	2									
.9	2									
1.0	3									
1.1	2									
1.2	3									
1.3	3									
1.4	3									
1.5	2									
1.6	3									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 19

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Miami, Oklahoma*

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.7	1		0	x									
-1.6	2		1					x					
-1.5	3	#	1				x						
-1.4	2		2										
-1.3	3	#	2										
-1.2	3		2	x									
-1.1	5		4										
- .9	2		2										
- .8	4		3					x					
- .7	1		1										
- .6	4		4										
- .5	1		1										
- .4	2		1			x							
- .3	3		2					x					
- .2	3		2		x								
- .1	2		2								x		
0	2		2										
.1	4	#	2					xx					
.2	3		3										
.3	2		2										
.4	3		3										
.5	2		1					x					
.6	3		3										
.8	3		2					x					
.9	3		3										
1.0	3		2										
1.1	3		1		x		x						
1.2	3		1				x	x	x	x			
1.4	4	#	3					x					
1.5	3		2		x								
1.6	3		2		x								
1.7	2		1					x					
Total	87		62	2	4	1	2	10	1	4	2	0	1
Elimin.	11	#	8		x			x					
Retained	1		1										

#One or more cases with multiple defect

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 19 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Flying Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.7	1									
-1.6	2									
-1.5	3									
-1.4	2									
-1.3	3						x			
-1.2	3									
-1.1	5				x					
- .9	2									
- .8	4									
- .7	1									
- .6	4									
- .5	1									
- .4	2									
- .3	3									
- .2	3									
- .1	2									
0	2									
.1	4					x				
.2	3									
.3	2									
.4	3									
.5	2									
.6	3									
.8	3									
.9	3									
1.0	3									
1.1	3									
1.2	3									
1.4	4									
1.5	3									
1.6	3									
1.7	2									
Total	87	0	0	0	1	1	1	0	0	0
Elimin.	11					xx				
Retained	1									

TABLE 20

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Terrell, Texas

	Suitability		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2												
310	1		1									
130	4		4									
133	1	#	0									
230	2	#	0						x			
123	1		1									
2												
200	4		2					x				
201	2		2									
210	12	#	9		xx		x	x				
211	12		7					x	x			
212	1		1									
220	3	#	1	x				x				
221	5	#	3		x		x					
222	1		1									
120	4	#	1	xx				xx				
121	10	#	6		x							
122	2		2									
112	1		0									
1												
100	9	#	2					xx				
101	1		0									
110	7	#	4	x	x		x					
111	1		0									
010	1		0									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x	x				
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 20 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Terrell, Texas

	Suitability	Prism Divergence	Angle of Convergence FcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
3										
310	1									
130	4									
133	1	x								x
230	2	x								x
123	1									
2										
200	4	x								
201	2									
210	12	x				x				
211	12	xx						x		
212	1									
220	3	x								
221	5	xx								
222	1									
120	4	xx								
121	10	xx							x	x
122	2									
112	1	x								
1										
100	9	xxxx								xx
101	1	x								
110	7	xx						x		
111	1									x
010	1									x
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 21

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Terrell, Texas

S.S.	Day Total Dual		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
									N			
2.4	1		0									
2.3	1	#	0									
2.2	2		1									
2.1	1		0									
1.9	1		0									
1.7	1		1									
1.4	1		1									
1.2	2	#	1		x							
1.0	1		1									
.9	2		2									
.8	2		2									
.7	4	#	3						x			
.6	2	#	1		x		x					
.5	3		2					x				
.4	3		3									
.3	3	#	2					x				
.2	5	#	1		x			x				
.1	2		2									
0	4		1									
-.1	6		5		x							
-.2	4	#	1		x		x	x				
-.3	3	#	1	x			x					
-.4	5		2						x			
-.5	2	#	1					x				
-.6	2		1									
-.7	1	#	0	x								
-.8	4		2									
-.9	4	#	2	x				x				
-1.0	2		2									
-1.1	1		1									
-1.2	2		1									
-1.3	2		1									
-1.4	1		1									
-1.5	1		0									
-1.8	1		0									
-1.9	2		2									
-2.6	1	#	0	x				x				
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x	x				
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 21 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Terrell, Texas

S.S.a.	Day Total Dual	Prism Divergence	Angle of Convergence PcB.a.	Pd.a.	Accommodation 7.1 or less Rt.a.	Both	Lt.a.	13.3 or more Rt.a.	Both	Lt.a.
2.4	1	x								
2.3	1	x								x
2.2	2									x
2.1	1	x								
1.9	1	x								
1.7	1									
1.4	1									
1.2	2	x								
1.0	1									
.9	2									
.8	2									
.7	4									x
.6	2					x				
.5	3									
.4	3									
.3	3	x								
.2	5	x						x		x
.1	2									
0	4	xxx								
= .1	6									
= .2	4	x								x
= .3	3	x						x		
= .4	5									xx
= .5	2	x								
= .6	2	x								
= .7	1	x								
= .8	4	xx								
= .9	4	x								
-1.0	2									
-1.1	1									
-1.2	2	x								
-1.3	2	x								
-1.4	1									
-1.5	1								x	
-1.8	1	x								
-1.9	2									
-2.6	1									
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 22

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Dual to 1st Solo		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.6	1	#	0						x			
2.5	1		0									
2.2	1		0									
2.0	2	#	0		x							
1.9	1		1									
1.7	1		1									
1.6	1		0									
1.3	1		0									
1.2	1	#	0		x		x					
1.1	3		2									
1.0	1		1									
.9	1		1									
.8	3		1									
.7	5		3									
.6	2		2									
.5	2		2									
.4	3		1									
.2	2	#	1	x			x					
.1	3		3									
0	1		1									
- .1	2		1					x				
- .2	2		2									
- .3	4		2									
- .4	6	#	5		x		x					
- .5	3		2									
- .6	4	#	2	x				xx				
- .7	7	#	4		x							
- .8	2		0					x				
- .9	4	#	1		x							
-1.0	5	#	3					x	x			
-1.1	5	#	3	x				x				
-1.2	2		1									
-1.5	1		0									
-1.7	1	#	0	x				x				
-2.2	1		1									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x	x				
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 22 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Terrell, Texas

S.S.	Dual to 1st Solo	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.6	1									x
2.5	1									x
2.2	1	x								
2.0	2	xx								
1.9	1									
1.7	1									
1.6	1									x
1.3	1	x								
1.2	1					x				
1.1	3	x								
1.0	1									
.9	1									
.8	3	xx								
.7	5	xx								
.6	2									
.5	2									
.4	3	xx								
.2	2							x		
.1	3									
0	1									
- .1	2									
- .2	2									
- .3	4	x								x
- .4	6	x								
- .5	3	x								
- .6	4	x								
- .7	7	xx								x
- .8	2									x
- .9	4	x						x		x
-1.0	5	x								
-1.1	5	x								
-1.2	2								x	
-1.5	1	x								
-1.7	1									
-2.2	1									
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 23

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Eso N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
3.0	1		1									
2.4	2		2									
1.8	3		2									
1.2	6	#	3	x	x		x					
.6	19	#	12	x	x			x				
0	25	#	12	x			x	xxx	x			
- .6	12	#	5		xx			x				
-1.2	13	#	8	x				x	x			
-1.8	3		2									
-2.4	1	#	0		x		x					
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x					
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 23 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Link Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
3.0	1									
2.4	2									
1.8	3									x
1.2	6	xx				x				
.6	19	xxxx						x		
0	25	xxxxxx						x		xxx
- .6	12	xxx							x	x
-1.2	13	xxx								xx
-1.8	3	x								
-2.4	1	x								
Total	85	21	0	0	0	1	0	2	1	7
Elimin	13	xxxx				x				
Retained	3	x								

TABLE 24

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Night Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso N	Exo	R.H.	L.H.
1.9	1	#	0		x							
1.7	1	#	0	x			x					
1.6	5		3					x				
1.4	2		2									
1.2	6	#	4		x		x					
.9	4		2		x							
.7	2	#	1					x				
.6	4	#	3	x				x				
.2	7	#	6		x		x					
- .1	15	#	7	xx				xx	xx			
- .3	14	#	6					x				
- .4	2		1									
- .6	4		4									
- .8	4		2									
-1.0	1		0									
-1.1	4	#	2		x							
-1.3	1		0									
-1.5	1	#	0									
-1.6	2		2									
-1.8	1		1									
-2.0	2		0					x				
-2.8	2		1									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x					
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases = 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 24 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Terrell, Texas

S.S.	Night Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
1 9	1	x								
1.7	1							x		
1.6	5							x		
1.4	2									
1.2	6					x				x
.9	4									x
.7	2	x								
.6	4									
.2	7	x								
- .1	15	xxx							x	x
- .3	14	xxxxx								xx
- .4	2	x								
- .6	4									
- .8	4	xx								
-1.0	1	x								
-1.1	4	xx								
-1.3	1									x
-1.5	1	x								x
-1.6	2									
-1.8	1									
-2.0	2	x								
-2.8	2	x								
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx				x				
Retained	3	x								

TABLE 25

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.3	1		1									
2.1	4	#	1	x			x	x				
1.9	1		0									
1.8	1		1									
1.5	1		0									
1.2	1		1									
1.1	3		2									
.8	2		2									
.7	3		1						x			
.6	2		2									
.5	5	#	2		x							
.4	7	#	4					x				
.3	2	#	1					x				
.2	8	#	6						x			
.1	2		2									
0	5	#	2		x		x	x				
- .1	3		1					x				
- .2	7		5									
- .3	4	#	1	xx				x				
- .4	3	#	1		x							
- .6	5	#	3	x	x		x	x				
- .7	1		1									
- .9	1		0									
-1.0	3		1									
-1.2	2		0		x							
-1.3	1		0									
-1.4	1		1									
-1.5	1		1									
-1.8	2		2									
-1.9	1		0									
-2.4	1		1									
-3.0	1		1									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x					
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 25 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Terrell, Texas

S.S.	Instrument Test	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.3	1									
2 1	4							xx		
1 9	1	x								
1.8	1									
1.5	1								x	
1.2	1									
1.1	3	x								
.8	2									
.7	3									
.6	2									x
.5	5	xx								xx
.4	7	xx								x
.3	2	x								
.2	8	x								x
.1	2									
0	5	xx								
= .1	3									x
= .2	7	xx								
= .3	4	xx								
= .4	3	xx								
= .6	5					x				
- .7	1									
- .9	1	x								
-1.0	3	x								x
-1.2	2	x								
-1.3	1	x								
-1.4	1									
-1.5	1									
-1.8	2									
-1.9	1	x								
-2.4	1									
-3.0	1									
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx				x				
Retained	3	x								

TABLE 26

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Terrell, Texas

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.1	1		0									
1.9	1	#	0		x							
1.8	2		2									
1.7	2		1						x			
1.6	3		2					x				
1.4	1		1									
1.3	1		1									
1.0	5	#	1		x		x		x			
.9	3		1					x				
.8	1		1									
.7	2		2									
.6	3	#	2					x				
.5	6	#	2	x				x				
.4	3	#	1	x			x					
.3	2		1									
.2	3	#	1					x				
.1	1		1									
0	5	#	2	x	x		x	x				
- .1	2		2									
- .2	5	#	3		xx							
- .3	3		2									
- .4	4		4									
- .5	1		1									
- .6	6	#	4									
- .8	4		2									
- .9	3		1									
-1.0	2		1									
-1.4	1		0					x				
-1.5	3	#	1	x								
-1.6	1		1									
-1.8	1		1									
-1.9	2		1									
-2.1	1		1									
-2.2	1		0									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x					
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 26 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Ferrell, Texas

S.S.	General Test	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.1	1	x								
1.9	1	x								
1.8	2									
1.7	2									
1.6	3									
1.4	1									
1.3	1									
1.0	5	x				x		x		x
.9	3	x								
.8	1									
.7	2									
.6	3	x								
.5	6	x							x	x
.4	3	x						x		
.3	2									x
.2	3	x								x
.1	1									
0	5	xx								
-.1	2									
-.2	5	x								
-.3	3	x								
-.4	4									
-.5	1									
-.6	6	x								xx
-.8	4	xx								
-.9	3	x								x
-1.0	2	x								
-1.4	1									
-1.5	3	xx								
-1.6	1									
-1.8	1									
-1.9	2	x								
-2.1	1									
-2.2	1	x								
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx				x				
Retained	3	x								

TABLE 27

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Character and Leadership		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso N	Exo	R.H.	L.H.
2.0	2		1									
1.9	1		0									
1.8	1		0									
1.4	9	#	3		x							
1.3	1		1									
1.2	2		2									
1.0	2		2									
.8	10	#	7		x			x				
.7	2		2									
.1	16	#	10	x	x		xx	x				
0	1		1									
- .1	2		2									
- .8	16	#	8	xx	xx		x	xxx	x			
- .9	2		0									
-1.0	3	#	2	x								
-1.1	3		1					x				
-1.2	2		1									
-1.3	4		2									
-1.4	2		1						x			
-1.5	2	#	0									
-1.6	2	#	1					x				
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x	x				
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 27 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Terrell, Texas

S.S.	Character and Leadership	Prism Divergence	Angle of Convergence Pc3.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.0	2	x								
1.9	1	x								
1.8	1									x
1.4	9	xxxx								xx
1.3	1									
1.2	2									
1.0	2									
.8	10	xx								
.7	2									
.1	16					x		xx	x	x
0	1									
- .1	2									
- .8	16	xxx								xx
- .9	2	xx								
-1.0	3	x								
-1.1	3	x								
-1.2	2	x								
-1.3	4	xx								
-1.4	2									
-1.5	2	xx								x
-1.6	2	x								
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 28

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.7	1		1									
-1.6	3	#	0		x			x				
-1.5	2		1									
-1.4	2		1						x			
-1.3	5	#	4	x			x					
-1.2	1		1									
-1.1	2		1									
-1.0	4	#	2						x			
- .9	2	#	1		x		x					
- .8	2		1									
- .7	2	#	0					xx				
- .6	3		2									
- .5	3		3									
- .4	3		3									
- .3	2		1									
- .2	3	#	1	x				x				
- .1	2		0					x				
0	1		1									
.1	5	#	2	x	x		x	x				
.3	4		3									
.4	2		2									
.5	3		1									
.6	1	#	0		x							
.7	3	#	1		x							
.8	3		3									
.9	1		1									
1.0	3		2									
1.1	3		1									
1.2	2		1									
1.3	2	#	0	x								
1.4	3		2						x			
1.5	1		1									
1.6	3		1									
1.7	2		1									
1.8	1		1									
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x					
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 28 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Terrell, Texas

S.S.	Flying Test	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Lt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Rt.	Accommodation 13.3 or more Lt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Rt.
-1.7	1									
-1.6	3	xx								
-1.5	2							x		
-1.4	2									
-1.3	5							x		
-1.2	1									
-1.1	2	x								
-1.0	4	x								x
-.9	2					x				
-.8	2									x
-.7	2	xx								
-.6	3									x
-.5	3									
-.4	3									
-.3	2									x
-.2	3								x	
-.1	2	x								
0	1									
.1	5	xx								
.3	4	x								
.4	2									
.5	3	xx								
.6	1	x								
.7	3	x								x
.8	3									
.9	1									
1.0	3	x								
1.1	3									xx
1.2	2	x								
1.3	2	xx								
1.4	3									
1.5	1									
1.6	3	xx								
1.7	2	x								
1.8	1									
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 29

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Terrell, Texas*

S.S.	Ground Exam		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.8	2		1									
-1.6	2	#	1		x							
-1.5	4	#	3	x				x				
-1.4	1		0									
-1.3	3		3									
-1.2	3	#	0	x				xx				
-1.1	2		1									
-1.0	3		3									
- .9	3		3									
- .8	2		1									
- .7	3		3									
- .6	1		0					x				
- .5	3	#	0		x		x					
- .4	5	#	3	x			x	x				
- .3	2	#	1		x		x					
- .2	2	#	0									
- .1	2		2									
0	3		2									
.1	3	#	2					x				
.2	2		0									
.3	2	#	1						x			
.4	3		3									
.5	2		2									
.6	2		1									
.7	2	#	0		x				x			
.8	2		1									
.9	3		2									
1.0	2		2									
1.1	3		1					x				
1.2	3		3									
1.3	2		2									
1.4	1		0									
1.5	2		0									
1.6	2		1									
1.7	1		1									
1.8	1	#	0	x								
1.9	1		0		x							
Total	85		47	4	5	0	3	7	2	0	0	0
Elimin.	13	#	6		x		x	x				
Retained	3		0						x	x		

#One or more cases with multiple defect

*Terrell cases = 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 29 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Terrell Texas

S.S.	Ground Exam	Prism Divergence	Angle of Convergence PoP.	Fd.	Accommodation .1 or less Rt.	Both	Lt.	.3 or more Rt.	Both	Lt.
-1.8	2	x								
-1.6	2	x								
-1.5	4									
-1.4	1							x		
-1.3	3									
-1.2	3	x								
-1.1	2	x								
-1.0	3									
- .9	3	xx								
- .8	2									x
- .7	3									
- .6	1									
- .5	3	x				x				x
- .4	5	x						x		
- .3	2	x								
- .2	2	x								xx
- .1	2									
0	3									x
.1	3	x								
.2	2	xx								
.3	2									x
.4	3									
.5	2									
.6	2	x								
.7	2	x								
.8	2	x								
.9	3	x								
1.0	2									
1.1	3	x								
1.2	3									
1.3	2									
1.4	1	x								
1.5	2	x							x	
1.6	2									x
1.7	1									
1.8	1	x								
1.9	1									
Total	85	21	0	0	0	1	0	2	1	7
Elimin.	13	xxxx			x				x	x
Retained	3	x								

TABLE 30

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Mesa, Arizona*

	Suitability		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
3												
322	1		0									
231	1		1									
232	1		1									
123	1		1									
2												
210	2		2									
211	10	#	6		x		x	x		x		
212	7		5									
220	3	#	2		x			x				
221	11	#	6					xxx		xx		
222	3		3									
121	13	#	9			x		xxx		x		
1												
100	5		3					xx				
101	2		0					x				
110	12		8			x		xxx				
111	10	#	8			x		xx				
010	4		3					x				
011	1		1									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flying records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 30 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Mesa, Arizona

	Suitability	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
3										
322	1					x				
231	1									
232	1									
123	1									
2										
210	2									
211	10									x
212	7					xx				
220	3									x
221	11					x				
222	3									
121	13									
1										
100	5									
101	2				x					
110	12									
111	10									
010	4									
011	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 31

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Day Total Dual		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Eso N	Heterophoria at 6 meters Exo	R.H.	L.H.
3.6	1		1									
2.5	1		0									
2.2	1		1									
2.0	1		1									
1.8	1		1									
1.5	2		1					x				
1.4	1		0					x				
1.2	2	#	1					x				
1.1	1		1									
.9	1	#	0			x		x				
.8	3	#	0		x			xx				
.7	2		2									
.6	7		7									
.5	4		3					x				
.3	2		0									
.2	3		1					xx				
.1	3		3									
0	3		2							x		
- .1	5		2			x		x		x		
- .2	2		2									
- .3	5		5									
- .4	7		5					xx				
- .5	10		7			x		xx				
- .7	3		2					x				
- .8	2	#	1					x		x		
- .9	1		1									
-1.0	4	#	1		x		x	x				
-1.1	3		2							x		
-1.2	1		1									
-1.4	1		1									
-1.6	1		1									
-2.2	2		2									
-2.7	1		1									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2		xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 31 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Day Total Dual	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
3.6	1									
2.5	1					x				
2.2	1									
2.0	1									
1.8	1									
1.5	2									
1.4	1									
1.2	2					x				
1.1	1									
.9	1									
.8	3					x				x
.7	2									
.6	7									
.5	4									
.3	2				x					x
.2	3									
.1	3									
0	3									
-.1	5									
-.2	2									
-.3	5									
-.4	7									
-.5	10									
-.7	3									
-.8	2									
-.9	1									
-1.0	4					x				
-1.1	3									
-1.2	1									
-1.4	1									
-1.6	1									
-2.2	2									
-2.7	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 32

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Day Dual to 1st Solo		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.6	1	#	0					x		x		
2.1	2		1			x						
2.0	1		1									
1.9	2		1					x				
1.8	1		1									
1.6	3	#	1			x		xx				
1.4	1		1									
1.0	1		1									
.9	4		2					x				
.8	3		3									
.7	1		1									
.5	4		3					x				
.4	1	#	0		x		x					
.3	1		0									
.2	2		2									
.1	5		5									
0	3		2			x						
-.1	6	#	3					xxx				
-.2	7	#	4		x			xx		x		
-.3	3		2							x		
-.4	10		8					x				
-.5	8		5					xx				
-.6	1		1									
-.7	1		0							x		
-.8	7		5					x				
-1.0	2		2									
-1.3	2		2									
-1.7	1		1									
-2.1	2		1					x				
-3.7	1		0					x				
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 32 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Day Dual to 1st Solo	Prism Divergence	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.6	1									
2.1	2									
2.0	1									
1.9	2									
1.8	1									
1.6	3									
1.4	1									
1.0	1									
.9	4									
.8	3					x				
.7	1									
.5	4									
.4	1									
.3	1									
.2	2									x
.1	5									
0	3									
-.1	6									
-.2	7					x				
-.3	3									x
-.4	10									
-.5	8					x				
-.6	1					x				
-.7	1									
-.8	7									
-1.0	2				x					
-1.3	2									
-1.7	1									
-2.1	2									
-3.7	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 33

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.4	2		2									
1.9	1	#	0		x			x				
1.5	1		1									
1.2	5		3					xx				
.8	9		7					x		x		
.6	12	#	8					xxx		x		
.3	6		4					x		x		
.1	9	#	8					x				
= .1	10	#	6		x	x	x	x				
= .4	9	#	1			x		xxxx		x		
= .6	6		4					x				
= .8	3		3									
-1.0	7		7									
-1.7	1		1									
-2.0	1		0			x						
-2.2	3		3									
-2.6	1		0					x				
-3.3	1		1									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 33 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Less, Arizona

S.S.	Link Test	Prism Divergence	Angle of Convergence PcB	Pd	Accommodation 7.3 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.4	2									
1.9	1									x
1.5	1									
1.2	5									
.8	9									
.6	12					x				
.3	6									
1	9					x				
- .1	10				x					
.4	9					xx				
- .6	6									x
- .8	3									
-1.0	7									
-1.7	1									
-2.0	1									
-2.2	3									
-2.6	1									
-3.3	1									
Total	87	0	0	0	1	~	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 34

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Night Test		No Visual Defect	Visual Acuity			Depth Perception		Heterophoria at 6 meters			
				R.E.	Both	L.E.	A	N	Eso N	Exo	R.H.	L.H.
2.3	2		2									
1.6	6		2					x		xx		
.9	15	#	11			x		xx		x		
.8	1		1									
.7	1		1									
.4	1		1									
.2	20	#	12		xx	x	x	xxxx				
- .3	1		1									
- .4	21		13			x		xxxxx		x		
- .8	2		2									
-1.0	1		1									
-1.1	10		6					xxxx				
-1.8	5		5									
-3.2	1		1									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 34 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Night Test	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.3	2									
1.6	6					x				
.9	15									x
.8	1									
.7	1									
.4	1									
.2	20					xxx				x
- .3	1									
- .4	21				x					
- .8	2									
-1.0	1									
-1.1	10									
-1.8	5									
-3.2	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 35

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso N	Exo	R.H.	L.H.
1.9	1		1									
1.6	8		5							x		
1.2	4		4									
1.0	1		0							x		
.7	12	#	6		x		x	xxxx		xx		
.5	1		1									
.3	6		3					xx				
.2	4		3					x				
0	4		4									
- .2	6	#	3			xx		xx				
- .4	18	#	12		x	x		xxxx				
- .6	4		4									
- .8	1		1									
- .9	2		0					xx				
-1.0	1		1									
-1.1	6		5					x				
-1.3	1		1									
-1.5	5		4					x				
-2.7	1		0									
-3.7	1		1									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 35 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Instrument Test	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
1.9	1									
1.6	8					xx				
1.2	4									
1.0	1									
.7	12					x				
.5	1									
.3	6									x
.2	4									
0	4									
- .2	6									
- .4	18					x				x
- .6	4									
- .8	1									
- .9	2									
-1.0	1									
-1.1	6									
-1.3	1									
-1.5	5									
-2.7	1				x					
-3.7	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 36

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
2.0	1		1									
1.8	2		2									
1.6	2		1									
1.3	8	#	3					xx		xx		
1.1	1		1									
1.0	3	#	2		x			x				
.9	5		3					x		x		
.7	3		2									
.6	5		4					x				
.4	2		2									
.1	11	#	8					xx		x		
- .1	2		0			x		x				
- .2	1		1									
- .3	1		0									
- .4	1		1									
- .5	3		3									
- .6	13	#	9		x		x	xx				
- .7	1		1									
- .8	3		1					xx				
- .9	2		2									
-1.0	1	#	0			x		x				
-1.1	7		5					x				
-1.3	2		2									
-1.4	1		1									
-1.5	1		1									
-1.9	1		0					x				
-2.0	4		3			x						
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 36 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Mesa, Arizona

S.S.	General Test	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pt.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.0	1									
1.8	2									
1.6	2					x				
1.3	8					xx				
1.1	1									
1.0	3									x
.9	5									
.7	3					x				
.6	5									
.4	2									
.1	11									
- .1	2									
- .2	1									
- .3	1									x
- .4	1									
- .5	3									
- .6	13									
- .7	1									
- .8	3									
- .9	2									
-1.0	1									
-1.1	7				x					
-1.3	2									
-1.4	1									
-1.5	1									
-1.9	1									
-2.0	4									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 37

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Character and Leadership		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
-1.7	2		2									
-1.6	2	#	0		x		x	x				
-1.5	3		1					x				
-1.4	2		1									
-1.3	2		2									
-1.2	3		2			x						
-1.1	3		0					xxx				
-1.0	5		5									
- .9	1		1									
- .8	4		3									
- .6	3		1			x		x				
- .5	2		1					x				
- .4	3	#	2					x		x		
- .3	2		2									
- .2	3		2							x		
- .1	2		2									
0	3		2							x		
.1	2		1					x				
.2	3		2					x				
.3	3		3									
.4	2		1					x				
.5	4		4									
.7	5	#	3		x	x		xx				
.8	3		2							x		
.9	3		2									
1.0	1		0									
1.1	2		1					x				
1.2	2		2									
1.3	3		3									
1.4	1		0					x				
1.5	2		2									
1.6	2		1					x				
1.7	3		3									
1.8	1		0					x				
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases = 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 37 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Character and Leadership	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.7	2									
-1.6	2					x				
-1.5	3				x					
-1.4	2					x				
-1.3	2									
-1.2	3									
-1.1	3									
-1.0	5									
- .9	1									
- .8	4					x				
- .6	3									
- .5	2									
- .4	3									
- .3	2									
- .2	3									
- .1	2									
0	3									
.1	2									
.2	3									
.3	3									
.4	2									
.5	4									
.7	5									x
.8	3									
.9	3									x
1.0	1					x				
1.1	2									
1.2	2									
1.3	3									
1.4	1									
1.5	2									
1.6	2									
1.7	3									
1.8	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 38

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Ground Exam		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Hetero Eso N	Heterophoria at 6 meters Exo	R.H.	L.H.
-1.8	1		1									
-1.7	2		1					x				
-1.6	2		2									
-1.5	2		1							x		
-1.4	3	#	1			x		xx				
-1.3	3		1					xx				
-1.2	3		3									
-1.1	3		3									
-1.0	2		2									
- .9	3		2					x				
- .7	3		3									
- .6	3		2									
- .5	3	#	1		x		x	x				
- .4	4		2			x		x				
- .3	2	#	0					xx		x		
- .2	2		2									
- .1	2		2									
0	2		0					xx				
.1	1		1									
.2	3		3									
.3	3		3									
.4	4		4									
.5	2		1							x		
.6	2		2									
.7	2		1					x				
.8	3	#	2		x			x				
.9	5		0					xx		x		
1.0	1		1									
1.1	2		1			x						
1.2	2		2									
1.3	3		3									
1.4	3		3									
1.5	3		1									
1.6	2		2									
1.7	1		0					x				
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases = 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 3g (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Ground Exam	Prism Divergence	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.8	1									
-1.7	2									
-1.6	2									
-1.5	2									
-1.4	3									
-1.3	3									
-1.2	3									
-1.1	3									
-1.0	2									
- .9	3									
- .7	3									
- .6	3									
- .5	3					x				
- .4	4					x				
- .3	2									
- .2	2									
- .1	2									
0	2									
.1	1									
.2	3									
.3	3									
.4	4									
.5	2									
.6	2									
.7	2									
.8	3									
.9	5									x
1.0	1				x					x
1.1	2									
1.2	2									
1.3	3									
1.4	3									
1.5	3									
1.6	2					xx				
1.7	1									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

TABLE 39

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Mesa, Arizona*

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.
									N			
-1.7	3		2									
-1.6	3		1							x		
-1.5	2		2									
-1.4	3		1					x		x		
-1.3	2		2									
-1.2	2	#	1					x				
-1.1	3		3									
-1.0	3		2					x				
- .9	1		0							x		
- .8	3	#	2		x			x				
- .7	3	#	1					xx		x		
- .6	3		2									
- .5	2		1					x				
- .4	2		2									
- .3	2		1					x				
- .2	4		3			x						
- .1	2	#	0		x		x					
0	2		2									
.1	3		3									
.2	1		0					x				
.3	3		3									
.4	2		1					x				
.5	4		4									
.6	4		3					x				
.7	1		1									
.8	3	#	1			x		xx				
.9	3		3									
1.0	2		2									
1.1	2		1					x				
1.2	3		1					xx				
1.3	3		3									
1.4	2		2									
1.5	2		0			x						
1.6	2		1					x				
1.7	2		2									
Total	87		59	0	2	3	1	17	0	4	0	0
Elimin.	5	#	2	x	xx		x					
Retained	6	#	5		x		x					

#One or more cases with multiple defect

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 39 (Continued)

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Flying Test	Prism Divergence	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.7	3					x				
-1.6	3					x				
-1.5	3									
-1.4	3									
-1.3	2									
-1.2	2					x				
-1.1	3									
-1.0	3									
- .9	1									
- .8	3									x
- .7	3									
- .6	3					x				
- .5	2									
- .4	2									
- .3	2									
- .2	4									
- .1	2									x
0	2									
.1	3									
.2	1									
.3	3									
.4	2									
.5	4									
.6	4									
.7	1									
.8	3									
.9	3									
1.0	2									
1.1	2									
1.2	3									
1.3	3									
1.4	2									
1.5	2				x					
1.6	2									
1.7	2									
Total	87	0	0	0	1	4	0	0	0	2
Elimin.	5				x					
Retained	6									

APPENDIX 6

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES IN TERMS OF ~~VISUAL DEFECT~~ DISTRIBUTIONS

(Advanced Students)

Appendix 6a: Clewiston, Florida
Appendix 6b: Miami, Oklahoma
Appendix 6c: Terrell, Texas
Appendix 6d: Mesa, Arizona

TABLE 1

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-2.6	1		1																			
-1.5	3	#	2	x				x													x	
-1.3	1		1																			
-1.2	3	#	0	x		x	x	x		x												
-1.0	7	#	2	x		x	x	xx													x	
-.7	6		4	x																	x	
-.4	3		2					x														
-.3	3		5		x			xx													x	
-.2	9		7					x		x												
-.8	7		4		x	x			x													
1.2	4		4																			
1.4	4		3		x																	
1.6	2	#	1		x					x							x					
1.8	2		1															x				
1.9	1		0					x														
Total	63		37	4	4	3	2	9	1	3	0	0	0	0	0	0	1	1	0	4	0	
Elimin.	17	#	12		xx			x									x			xxx		
Ret.	2		2	(no flight records)																		
Ret.	1		1																			

#One or more cases with multiple defect.

TABLE 2

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Ground Exam Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.8	2	#	0	x			x	x												x		
-1.7	2		2																			
-1.5	3	#	1			x		xx														
-1.4	2		1																	x		
-1.3	1		1																			
-1.2	1		0	x																		
-1.0	2		2																			
- .9	2		1							x												
- .8	1		1																			
- .7	1		1																			
- .6	2		2																			
- .5	2		2																			
- .4	2	#	0		x					x										x		
- .3	2		2																			
- .2	3		2					x														
- .1	1		0		x																	
0	5	#	2		x	x		xx														
.2	2		2																			
.3	2		1	x																		
.4	2	#	1	x						x												
.5	3		2				x															
.6	1		1																			
.7	1		0					x														
.8	2		2																			
.9	2		1																x			
1.0	2		1					x														
1.1	2		0			x		x														
1.2	1		1																			
1.3	2		0						x											x		
1.4	3		2		x																	
1.5	1		1																			
1.7	3		2														x					
Total	63		37	4	4	3	2	9	1	3	0	0	0	0	0	0	1	1	0	4	0	
Elimin.	17	#	17		xx			x									x			xxx		
Ret.	2		2 (no flight records)																			
Ret.	1		1																			

#One or more cases with multiple defect.

TABLE 3

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Clewiston, Florida

S.S.	Char. and Lead.		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso N	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
1.8	2		1																		
1.7	2		2																		
1.6	2	#	1			x		x													
1.5	1		0				x														
1.4	1	#	0	x				x												x	
1.3	2		2																		
1.2	1		0					x													
1.1	2		2																		
.9	5	#	4	x						x							x				
.7	4		2		x					x											
.5	1		0														x				
.4	3		2					x													
.3	2		1					x													
.2	2		2																		
.1	2		1	x																	
.1	3		1	x																x	
.3	8		4			x			x									x		x	
.6	4		2					x												x	
.9	8	#	3		xxx		x	x		x											
1.3	1		1																		
1.4	4		3					x													
1.6	2		2																		
1.7	1		1																		
1.8	1	#	0			x		x													
Total	63		37	4	4	3	2	9	1	3	0	0	0	0	0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x									x			xxx	
Ret.	2		2	(no flight records)																	
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 4

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Clewiston, Florida

S.S.	General Test	No Visual Defect		Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence [illegible]	Pd.	Rx.	Accommodation 7.1 or less Both	[illegible]	[illegible]	13.3 or more [illegible]	[illegible]
26	1		1																		
22	1		0	x																	
18	2		1	x																	
17	1		1																		
14	1		1																		
13	1		1																		
12	1		0				x														
11	1		1																		
10	1		0				x														
9	1	#	0	x						x											
8	1		0																	x	
7	1		0					x													
6	4	#	2		x	x		x													
5	6	#	2	x		x		xxx												x	
3	2		2																		
2	1		1																		
1A	4		4																		
0	2		2																		
1	2		0					x												x	
2	5		3					x	x												
3	3		2		x																
4	1		1																		
5	2		1					x													
6	1		1																		
7	2		2																		
8	2		1							x											
9	2	#	1		x					x											
10	2		1		x																
11	3		3																		
13	1		1																		
14	1		0															x			
16	2		0			x											x				
21	1		1																		
23	1		0					x													
Total	63		37	4	4	3	2	9	1	3	0	0	0	0		0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x										x			xxx	
Ret.	2		2	(no flight records)																		
Ret	1		1																			

TABLE 5

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Angle of Convergence 7.1 Rt.	Accommodation or less Both	Accommodation or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.0	1		1																			
1.6	1	#	0	x				x													x	
1.5	1		1																			
1.4	1		1																			
1.3	2		2																			
1.2	2		1	x																		
1.1	4	#	1		x	x		x													x	
.9	2		2																			
.8	2		2																			
.7	2		1					x														
.6	2	#	1			x		x														
.5	2		2																			
.4	2		2																			
.3	1		1																			
.2	1		1																			
.1	4		1				x	xx														
0	3	#	1	x			x			x												
-.1	1		0														x					
-.2	4		1		x	x															x	
-.3	2	#	0		x					x											x	
-.5	3		3																			
-.6	2		0					x		x												
-.7	3		3																			
-.8	1		0					x														
-.9	3		3																			
-1.1	3		2						x													
-1.2	2		1	x																		
-1.5	1		1																			
-1.7	1		0		x																	
-1.9	1		1																			
-2.0	2		1															x				
-2.4	1		0					x														
Total	63		37	4	4	3	2	9	1	3	0	0	0	0		0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x										x			xxx	
Ret.	2		2 (no flight records)																			
Ret.	1		1																			

#One or more cases with multiple defect.

TABLE 6

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	7.1 Rt.	Accommodation 13.3 or more Both	Lt.	Rt.	Both	Lt.
1.9	1	#	0	x				x												x	
1.8	1		1																		
1.6	3		3																		
1.5	4		3					x													
1.3	2	#	1	x						x											
1.2	1		0																	x	
1.0	3		2				x														
.9	2	#	1			x		x													
.8	2	#	0			x		x												x	
.6	1		0							x											
.5	2		1				x														
.3	3		2			x															
.2	3		1					x	x												
0	6		4		x			x													
- .1	3		2	x																	
- .3	2		1					x													
- .4	2		1	x																	
- .6	3		2																	x	
- .7	2		0		x			x													
- .9	2		0														x	x			
-1.0	4		4																		
-1.2	5	#	3		xx					x											
-1.3	3		2					x													
-1.5	2		2																		
-1.6	1		1																		
Total	63		37	4	4	3	2	9	1	3	0	0	0	0		0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x										x			xxx	
Ret.	2		2 (no flight records)																		
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 7

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Night Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
									N												
2.7	1	#	0			x		x													
1.6	4	#	1	x		x		x		x											
1.3	1		1																		
1.1	8	#	2	x			xx	xxx	x											x	
.9	1		0	x																	
.7	2		2																		
.5	4		3																	x	
.3	4		3					x													
.2	3		3																		
0	4		3					x													
-.2	8		6		x															x	
-.4	4		2		x															x	
-.6	4		4																		
-.8	5	#	3		x					xx											
-.9	3	#	0		x	x		x										x			
-1.1	2		2																		
-1.3	1		1																		
-1.7	1		0														x				
-1.9	1		1																		
-2.1	1		0	x																	
-2.8	1		0					x													
Total	63		37	4	4	3	2	9	1	3	0	0	0	0	0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x									x			xxx	
Ret.	2		2	(no flight records)																	
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 8

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Applied Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Prism Diver. R.H.	Prism Diver. L.H.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
1.9	1		0	x																
1.8	1		1																	
1.7	1		0																x	
1.6	1		0							x										
1.4	1		1																	
1.3	1		1																	
1.2	2	#	0	x				x		x										
1.1	2		1				x													
.9	3	#	1	x				xx											x	
.8	2		1					x												
.7	1		1																	
.5	5	#	3		x	x		x												
.4	6	#	3			x		x									x		x	
.3	2		1				x													
.2	2		1																x	
0	3		3																	
- .1	2		2																	
- .2	4		3		x															
- .3	2		0					x	x											
- .5	4		3					x												
- .6	2		0			x										x				
- .7	3		3																	
-1.0	1		1																	
-1.1	3		2					x												
-1.2	1		1																	
-1.4	1		0	x																
-1.6	1		1																	
-1.7	1	#	0		x					x										
-1.9	1		0		x															
-2.0	1		1																	
-2.1	1		1																	
-2.4	1		1																	
Total	63		37	4	4	3	2	9	1	3	0	0	0	0	0	0	1	1	0	4	0
Elimin.	17	#	12		xx			x									x			xxx	
Ret.	2		2	(no flight record)																	
Ret.	1		1																		

#One or more cases with multiple defect.

TABL.

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Prism Diver. R.H.	Prism Diver. L.H.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
									A N												
-1.8	1		1																		
-1.6	3		1			x		x													
-1.5	2		1					x													
-1.4	3		2	x																	
-1.3	2		2																		
-1.2	2		2																		
-1.1	1		1																		
-1.0	2		1							x											
- .9	2		2																		
- .8	2		2																		
- .7	2		0	x	x																
- .6	4		3												x						
- .5	2		1					x													
- .4	2		1				x														
- .3	3		1		x				x												
- .2	1	#	0					x									x				
- .1	2		2																		
0	2		1					x													
.1	1		0						x												
.2	3		2					x													
.3	5		4					x													
.5	4	#	3				x		x												
.6	2		2																		
.7	2		2																		
.8	2		2																		
.9	2	#	1					x		x											
1.0	4		4																		
1.1	1		1																		
1.2	3	#	1		x			x								x					
1.3	2		1					x													
1.4	1		1																		
1.5	2		1		x																
1.6	3		2						x												
1.7	2		2																		
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0
Elimin.	9		8							x											
Ret.	2		2 (no flight records)																		

#One or more cases with multiple defect.

TABLE 10

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida

S.S.	Ground Exam Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.8	1		1																			
-1.7	2		1					x														
-1.6	2		1	x																		
-1.5	2	#	1				x			x												
-1.4	3		3																			
-1.3	2		2																			
-1.2	2		1					x														
-1.1	2		1							x												
-1.0	2		2																			
- .9	2		1		x																	
- .8	2		0	x		x																
- .6	3		1		x			x														
- .5	3		2					x														
- .4	1		1																			
- .3	3		2							x												
- .2	3		2						x													
- .1	2		2																			
0	2		2																			
.1	3		1					x									x					
.2	2		1								x											
.3	3		2					x														
.4	2		2																			
.5	3	#	2					x										x				
.6	1		1																			
.7	4		3				x															
.8	1		1																			
.9	2		2																			
1.0	2		1		x																	
1.1	3		3																			
1.2	1		1																			
1.3	3	#	2					x			x											
1.4	3		2		x																	
1.5	1		0					x														
1.6	3	#	2					x											x			
1.7	1		1																			
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0
Elimin.	9		8							x												
P.t.			2																			

-1.0-

TABLE 11

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Miami, Oklahoma

S.S.	Char. and Lead.		No Visual Defect	Visual Acuity			Depth Perception		Heterophoria at 6 meters				Prism Diver.	Angle of Convergence		7.1 or less			13.3 or more		
				R.E.	Both	L.E.	A	N	Eso A	Eso N	Exo	R.H.	L.H.		PcB.	Pd.	Rt.	Both	Lt.	Rt.	Both	Lt.
-1.7	1		0													x					
-1.6	3		2		x																
-1.5	3		2					x													
-1.4	1		0							x											
-1.3	4		3		x																
-1.1	3		2	x																	
-1.0	4	#	1	x				xx										x			
- .8	6		6																		
- .5	10	#	7					xxx			x								x		
0	11		5		x		x	xxx		x											
.5	7		6					x													
.8	5		5																		
1.0	12	#	8		x	x	x			x	x										
1.5	2		1							x											
1.7	4		4																		
1.9	1		1																		
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0
Elimin.	9		8							x												
Ret.	2		2	(no flight records)																		

#One or more cases with multiple defect.

TABLE 12

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
1.9	3		3																				
1.5	1		1																				
1.4	4		3					x															
1.3	2		1								x												
1.2	1		1																				
1.1	3		1			x		x															
.9	4		4																				
.8	2		1					x															
.7	2		2																				
.5	3	#	1		x			x											x				
.4	1		1																				
.3	1		0							x													
.2	4		3					x															
.1	6	#	3	x	x		x			x													
0	5		2	x				xx															
- .1	2		2														x						
- .2	3		2																				
- .3	3		3																				
- .4	2		1		x																		
- .5	1		0						x														
- .6	5		5																				
- .7	3		2		x																		
- .8	2	#	1					x			x												
- .9	1		1																				
-1.1	4	#	2				x	x											x				
-1.2	1		1																				
-1.5	1		1																				
-1.6	1		1																				
-1.7	1		1																				
-1.8	2		2																				
-1.9	1		0					x															
-2.0	1		0							x													
-2.5	1		1																				
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0	
Elimin.	9		8							x													
Ret.	2		2	(no flight records)				#One or more cases with multiple defe t.															

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
1.9	1		0			x																	
1.8	1		1																				
1.7	1		1																				
1.6	1		1																				
1.5	2		1		x																		
1 2	4		1	x			x	x															
1.0	1		0					x															
.9	3		1	x	x																		
.8	4		4																				
.7	3		3																				
.6	3		3																				
.5	1		0							x													
.4	2		2																				
.3	6	#	4					xx			x												
.2	4	#	2					x			x								x				
.1	3		3																				
0	8		6					xx															
= .2	5	#	3				x			xx													
= .3	3		2					x															
= .4	4	#	3					x										x					
= .5	3		2														x						
= .8	2		1					x															
= .9	1		1																				
=1.0	2		2																				
=1.3	1		1																				
=1.4	1		0		x																		
=1.5	1		1																				
=1.6	1		1																				
=1.7	1		1																				
=1.9	1		0		x																		
=2.4	1		0							x													
=2.6	1		1																				
=3.3	1		1																				
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0	
Elimin.	9		8							x													
Ret.	2		2	(no flight records)					#One or more cases with multiple defect.														

TABLE 14

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
									A N												
3.0	1		1																		
2.3	1		1																		
2.1	2		1					x													
1.1	1		1																		
1.2	3		1							xx											
.9	6	#	4	x				x										x			
.5	2		1					x													
.2	18	#	14		x			xxx			x										
0	9	#	5			x	x	x		x						x	x				
- .2	13		8		xx		x	xx													
- .5	3		3																		
- .7	4		3	x																	
- .9	7		4		x					x		x									
-1.2	1		1																		
-1.4	2		2																		
-1.6	2		1					x													
-3.2	2		2																		
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0
Elimin.	9		8							x											
Ret.	2		2	(no flight records)																	

#One or more cases with multiple defect.

TABLE 15

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Night Test		No Visual Defect	Visual Acuity			Depth Perception		Heterophoria at 6 meters				Prism Diver.	Angle of Convergence		7.1 or less	Accommodation		13.3 or more		
				R.E.	Both	L.E.	A	N	Eso A	Eso N	Exo	R.H.	L.H.		PcB.	Pd.	Rt.	Both	Lt.	Rt.	Both	Lt.
2.7	1		0					x													
2.4	1		1																		
1.7	2		1							x											
1.6	1		1																		
1.5	1		1																		
1.3	1		1																		
1.2	1		0														x				
1.1	4		1				x	xx													
.9	3		2			x															
.7	2		2																		
.6	3		2	x																	
.5	11	#	6	x	x		x	xx		x											
.4	2		2																		
.3	1		1																		
.2	1		1																		
0	8		8																		
- .1	3		3																		
- .3	2	#	1					x			x										
- .4	3		2		x																
- .5	4		3					x													
- .6	6	#	3		x			x		x									x		
- .7	2		2																		
- .8	3		2								x										
- .9	1		1																		
-1.0	2		0		x			x													
-1.1	3	#	2					x										x			
-1.8	1		1																		
-2.3	4		3						x												
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0
Elimin.	9		8							x											
Ret.	2		2 (no flight records)																		

#One or more cases with multiple defect.

TABLE 16

OCCURRENCE OF VISUAL DEFECT IN TERMS OF "APPLIED FLYING TEST" DISTRIBUTION
Miami, Oklahoma

S.S.	Applied Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso A	Heterophoria at 6 meters Eso N	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence FcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.6	1		1																				
1.8	1		1																				
1.7	7		4	x				x									x						
1.2	3		2					x															
1.0	3		2								x												
.8	2		2																				
.7	3		1			x		x															
.6	1		0				x																
.5	2	#	1					x										x					
.4	1		1																				
.3	4		2					x		x													
.2	3		1	x	x																		
.1	2		2																				
0	4		3					x															
- .2	4		4																				
- .3	2		1		x																		
- .4	10	#	8					xx			x									x			
- .5	1		0					x															
- .6	5		4		x																		
- .7	2		2																				
- .8	2		1						x														
- .9	1		1																				
-1.0	2	#	0				x	x		x													
-1.1	3		2					x															
-1.3	2		2																				
-1.4	1		1																				
-1.5	1		1																				
-1.7	1		1																				
-1.8	2		1		x																		
-2.2	1		1																				
Total	77		53	2	4	1	2	10	1	3	2	0	0	0	0	0	1	1	1	0	0	0	
Elimin.	9		8							x													
Ret.	2		2 (no flight records)																				

#One or more cases with multiple defect.

TABLE 17

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION

Terrell, Texas

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.8	1		1																			
-1.7	2	#	1		x								x									
-1.6	1		1																			
-1.5	4	#	3		x								x									
-1.4	1		0										x									
-1.3	3		1		x															x		
-1.2	3		2										x									
-1.0	2		2																			
- .9	2		0										xx									
- .8	2		1										x									
- .7	2		1					x														
- .6	1		1																			
- .5	2		2																			
- .4	2		2																			
- .3	2	#	1						x													x
- .2	3		2						x													
- .1	2		2																			
0	2		2																			
.1	2		2																			
.2	3		1					x												x		
.3	1		1																			
.4	3	#	1	x			x						x							x		
.5	3	#	0	x				xx					x									x
.6	3		2										x									
.7	2		2																			
.8	3	#	1					x					x									x
.9	3		1	x				x					x									
1.1	2	#	1		x		x										x					
1.2	3		1										xx									
1.3	2	#	0	x									x									x
1.4	2		0					x														x
1.5	2	#	1		x		x						x									
1.6	2		0										x									x
1.7	1		1																			
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6	
Elimin.	7	#	2										xxx									x
Ret.	6		3	(no flight records)					x	x			x									
Ret.	1		1																			

#One or more cases with multiple defect.

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Terrell, Texas

S.S.	Ground Exam Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.8	1		0						N				x								
-1.7	2	#	0		x								xx								
-1.6	1		1																		
-1.5	3		3																		
-1.4	1		0					x													
-1.3	2		1										x								
-1.2	3		3																		
-1.1	2		2																		
-1.0	2		2																		
- .9	3	#	1	x				x													x
- .8	3		2					x													
- .7	2		1										x								
- .6	1		1																		
- .5	2		0										x						x		
- .4	3		3																		
- .3	1		1																		
- .2	2	#	0		x		x						x								x
- .1	3		3																		
0	2		0					x												x	
.1	2		1										x								
.2	3		1										x								x
.3	2	#	1						x												x
.4	2		1										x								
.5	2		1						x												
.6	3	#	2	x				x													
.7	2	#	0	x	x		x						x						x		
.8	2		2																		
.9	1	#	0					x					x								
1.0	3	#	2		x		x										x				
1.1	2		0										xx								
1.2	1		0																		x
1.3	3		2																		x
1.4	2		1										x								
1.5	1		1																		
1.6	2	#	0	x				x					xx								
1.7	2		1		x																
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6
Elimin.	7	#	2										xxxx								
Ret.	6		3	(no flight records)					x	x			x								x
Ret.	1		1	#One or more cases with multiple defect.																	

TABLE 19

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Terrell, Texas

S.S.	Char. and Lead.		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PoB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.7	1		1																		
-1.6	2		1										x								
-1.5	2	#	0	x				x					x								
-1.4	3		0		x								xx								
-1.3	2	#	0		xx		x						xx								
-1.2	3	#	1					x	x				x								
-1.1	2		1					x													
-1.0	1		1																		
- .9	3		2										x								
- .8	2		2																		
- .7	6		4					x					x								
- .4	4	#	2		x		x										x			x	
- .1	6	#	4		x								xx								
.1	1		0																		x
.2	4	#	1	x				x	x										x		x
.3	1	#	0					x					x								
.4	2		1																		x
.5	4		3										x								
.7	3		1										x								x
.8	6		5																		x
1.1	4		4																		
1.3	3	#	2	x			x												x		
1.4	4		2					x					x								
1.5	3		1										x								x
1.7	2	#	1	x									x								
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6
Elimin.	7	#	2										xxx								x
Met.	6		3	(no flight records)					x	x			x								
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 20

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Terrell, Texas

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.2	2		1		x																
2.1	1	#	0		x								x								
1.6	2	#	1		x								x								
1.5	1		1																		
1.4	1		1																		
1.2	1		1																		
1.0	2		1					x													
.9	3		1										xx								
.7	5	#	3	x			x						x						x		
.6	4		2					x					x								
.5	3		1										x							x	
.4	2		2																		
.3	2		2																		
.1	4		2						x												x
- .1	6	#	4		x		x		x								x				x
- .2	9		7										x						x		
- .3	1		1																		
- .4	1		1																		
- .5	2		0					x													x
- .6	2		2																		
- .7	3		1										xx								
- .8	1		1																		
- .9	2	#	1	x				x													
-1.0	3	#	0	x				xx					x								x
-1.2	2		0										x								x
-1.3	2	#	1					x					x								
-1.5	2	#	0		x		x						xx								
-1.7	3	#	1	x									x								x
-2.1	1		0										x								
-2.6	1		1																		
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6
Elim.	7	#	2										xxx								x
Ret.	6		3	(no flight records)					x	x			x								
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 21

OCCURRENCE OF VISUAL DEFECTS IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Terrell, Texas

Instrument Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PoB.	Pd. Rt.	Accommodation .1 or less Both	13.3 or more Lt.	Rt.	Both	Lt.
		0										x							
1	#	0	x									x							
		4																	
2		2																	
		1																	
		3										x							
		1																	
		3										x							
		0										x							x
2	#	4					x					x					a		
		4																	
4	#	2		x		x						xx							
		1										x							
6	#	1	x				x					x							
5	#	1		x			x	x				xxx							
		1																	
2	#	1		x								x							
		2																	
		1										xx							
5		3					x												x
6		1																	
4	#	1	x			x		x									a		xx
1		1																	
6	#	0	x	x			xx					x							x
3		2					x												
1		1																	
1	#	0		x		x									a				
2		2															x		
		1																	
Total 74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	0	2	1	6
Eliman. 7	#	2										xxx							x
Ret. 6		3	(no flight records)					x	x			x							
Ret. 1		1	#One or more cases with multiple defect																

TABLE 22

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Terrell, Texas

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Exo	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.4	3		3																		
1.5	4	#	1		x								xx						x		
.7	24	#	14	x				xx					xxxxx							x	x
- .2	20	#	12		x		x	xxx					xxx				x				xx
-1.0	18	#	8	x	xxx		xx		xx				xxxx						x		xxx
-1.9	5	#	2	x				xx					xx								
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6
Elimin.	7	#	2										xxx								x
Ret.	6		3	(no flight records)					x	x			x								
Ret.	1		1																		

#One or more cases with multiple defect.

TABLE 23

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Terrell, Texas

S.S.	Night Test	No Visual Defect		Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
									N												
2.4	1		1																		
1.5	1		0										x								
1.3	8	#	4	x				x	x				x						x		x
1.1	1		1																		
1.0	1		1																		
.7	1		0																		x
.5	20	#	11		xx			x	x				xxxxx							x	x
.4	1		1																		
.2	4		3		x																
0	3	#	1					x					xx								
-.1	3		2										x								
-.3	5	#	4					x					x								
-.4	3		1										x								x
-.6	3	#	2	x				x													
-.9	3	#	2		x		x										x				
-1.1	6		4										x								x
-1.2	1		1																		
-1.4	1		1																		
-1.6	1		0																		x
-1.7	1		0					x													
-1.9	5	#	0	xx			x	x					xxx						x		
-2.5	1	#	0		x		x						x								
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6
Elimin.	7	#	2										xxxx								x
Ret.	6		6	(no flight records)					x	x			x								
Ret.	1		1																		

#One or more cases with multiple defect.

TABL. 2

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Terrell, Texas

S.S.	Applied Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
									N													
3.4	1	#	0		x								x									
2.1	2		2																			
1.6	1		1																			
1.3	1		0					x														
1.2	3		3																			
1.1	3	#	1					x					x						x			
.8	6		3										xxx									
.7	5		4										x									
.6	2	#	0						x				x									x
.5	3	#	1	x				x												x		
.4	4	#	3	x				x														
.3	4		3		x																	
.2	4		4																			
0	4		3										x									
- .1	4	#	1		x		x	x					x					x				x
- .2	1		0																			x
- .3	1	#	0		x		x						x									
- .4	2		1						x													
- .5	1		1																			
- .6	3	#	2		x								x									
- .7	1		1																			
- .8	1		0										x									
- .9	2		1										x									
-1.0	1	#	0	x									x									
-1.1	3		0					x					x									x
-1.2	3		1										xx									
-1.4	4	#	2	x			x												x			x
-1.7	1		0					x														
-1.8	1		1																			
-1.9	1		1																			
-2.0	1		0																			x
Total	74		40	4	5	0	3	7	2	0	0	0	17	0	0	0	1	0	2	1	6	
Elimin.	7	#	2										xxxx									x
Ret.	6		3	(no flight records)					x	x			x									
Ret.	1		1																			

#One or more cases with multiple defect.

TABLE 25

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.8	1		1																			
-1.7	1	#	0					x									x					
-1.6	1		1																			
-1.5	2		1							x												
-1.4	2		2																			
-1.3	2		2																			
-1.2	3		2							x												
-1.1	3		2			x																
- .9	2	#	1					x		x												
- .8	3		2					x														
- .7	2		0			x											x					
- .6	1		1																			
- .5	3		2					x														
- .4	2		2																			
- .3	3		3																			
- .2	2		2																			
- .1	2		2																			
0	2		2																			
.1	1		0					x														
.2	3		3																			
.3	1	#	0		x			x														x
.4	1		1																			
.5	3		2					x														
.6	2		0					xx														
.7	5	#	3		x		x	x														
.9	1	#	0			x		x														
1.0	4		4																			
1.1	1		0					x														
1.2	1		0					x														
1.3	2		2																			
1.4	3		2					x														
1.5	1		0					x														
1.6	4		2													x						x
1.7	1		1																			
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2	
Elimin.	10		8					x									x					
Ret.	12	#	8		x		x	x									x					

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Ground Exam Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
-1.6	2		2																		
-1.5	3		2					x													
-1.4	2		2																		
-1.3	3		3																		
-1.2	3		1					x		x											
-1.0	3	#	2			x		x													
- .9	2		0					xx													
- .8	2		2																		
- .7	4		2					xx									x				
- .6	1	#	0					x													
- .5	1		1																		
- .4	2		2																		
- .3	1		1																		
- .2	4		3					x													
- .1	1		1																		
0	2		0					xx													
.1	2		1							x											
.2	1		1																		x
.3	3		1			x															
.4	2		2																		
.5	2		2																		
.6	2		2																		
.7	2		0			x		x													
.8	2		2																		
.9	2		2																		
1.0	2	#	0		x		x	x		x											
1.1	1		1																		
1.2	3		3																		
1.3	3		3																		
1.4	1		1																		x
1.5	2	#	1		x			x													
1.6	2		2													x					
1.7	3		0					x									x				
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2
Elimin.	10		8					x									x				
Ret	12	#	8		x		x	x		x							x				

(no flight records) #One or more cases with multiple defect.

TABLE 7

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Mesa, Arizona

S.S.	Char. and Lead.	No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
-1.7	1	# 0					x									x				
-1.6	1	1																		
-1.5	2	2																		
-1.4	3	# 1		x	x	x														
-1.3	2	2																		
-1.2	2	1					x													
-1.1	3	2					x													
-1.0	2	2																		
- .9	2	1					x													
- .8	2	2																		
- .7	2	# 1			x		x													
- .6	2	1														x				
- .5	1	0																		x
- .4	3	2							x											
- .3	1	1																		
- .2	2	2																		
- .1	3	3																		
0	1	0					x													
.1	2	1					x													
.2	3	3																		
.3	2	# 1					x		x											
.4	2	1							x											
.5	2	1					x													
.6	3	2			x															
.7	2	# 1		x			x													x
.8	2	1					x													
.9	3	3																		
1.0	2	1					x													
1.1	2	1													x					
1.2	1	0					x													
1.3	2	2																		
1.4	1	1																		
1.5	1	0					x													
1.6	2	1					x													
1.7	2	2																		
1.8	1	1																		
1.9	1	1																		
Total	71	48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2
[illegible]	10	[illegible]																		

(no flight records)
#One or more cases with multiple defect.

TABLE 28

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Mesa, Arizona

S.S.	General Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
3.2	1		1																			
1.9	2		2																			
1.6	1	#	0					x									x					
1.3	4		3			x																
.8	1		1																			
.7	18	#	12			x		xx		xxx							x					
0	12	#	10		x			xx														x
- .3	3		3																			
- .6	18	#	10		x	x	x	xxxxx														x
- .9	2		1					x														
-1.3	4		2					x								x						
-1.9	4		3					x														
-2.5	1		0					x														
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2	
Elimin.	10		8					x									x					
Ret. (no flight records)	12	#	8		x		x	x		x							x					

#One or more cases with multiple defect.

TABLE 29

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Instrument Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PoB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
1.8	2		1			x																
1.4	4		4																			
.9	5		4			x																
.8	1	#	0					x									x					
.7	2	#	0					x		xx												
.5	18	#	14		x			xx		x							x					x
.1	8		17					x														
= .3	18	#	9		x	x	x	xxxxxxx														
.7	2		2																			
-1.1	3		1					xx														
-1.6	3		3																			
-2.0	2		2																			
-2.4	2		1													x						
-3.6	1		0																			x
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2	
Elimin.	10		8					x									x					
Ret. (no flight records)	12	#	8		x		x	x		x							x					

#One or more cases with multiple defect.

TABLE 30

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "LINK TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Link Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	Accommodation 7.1 or less Rt.	Both	Lt.	13.3 or more Rt.	Both	Lt.
2.4	2	#	0		x			xx													x
2.0	5		4							x											
1.0	10	#	7					xxx									x				
.5	9		6					xxx													
0	9	#	5			x		xxxx		x											
- .4	21	#	16		x	x	x	x								x					x
- .9	10		7					x		x							x				
-1.4	2		1			x															
-1.9	3		2					x													
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2
Elimin.	10		8					x									x				
Ret.	12	#	8		x		x	x		x							x				
(no flight records)																					

#One or more cases with multiple defect.

TABLE 31

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Night Test		No Visual Defect	Visual Acuity R.E.	Both	L.E.	Depth Perception A	N	Heterophoria at 6 meters Eso	Exo	R.H.	L.H.	Prism Diver.	Angle of Convergence PcB.	Pd.	7.1 Rt.	Accommodation Both	13.3 or more Lt.	Rt.	Both	Lt.
1.7	5		5														x				
1.5	3	#	0			x		x		x											
1.3	1		1																		
.9	1		0							x											
.7	19	#	14					xxx		x							x				x
.3	1		1																		x
.2	28	#	18		xx	xx	x	xxxxxxx													
.4	1		1																		
-1.2	6		4					xx													
-2.1	6		4					x								x					
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2
Elimin.	10		8					x									x				
Ret. (no flight records)	12	#	8		x		x	x		x							x				

#One or more cases with multiple defect.

TABLE 32

OCCURRENCE OF VISUAL DEFECT IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Mesa, Arizona

S.S.	Applied Flying Test		No Visual Defect	Visual Acuity R.E.	Visual Acuity Both	Visual Acuity L.E.	Depth Perception A	Depth Perception N	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Diver.	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation 7.1 or less Rt.	Accommodation 7.1 or less Both	Accommodation 7.1 or less Lt.	Accommodation 13.3 or more Rt.	Accommodation 13.3 or more Both	Accommodation 13.3 or more Lt.
2.4	3		1					x		x												
1.5	4	#	3					x									x					
1.3	1		0					x														
1.1	2		2																			
1.0	2		1							x												
.7	13	#	10			x		xx		x												
.6	1		0														x					
.5	1		1																			
.2	1		1																			
.1	1		1																			
- .2	17	#	11		x		x	xxxxx														
- .4	1	#	0			x		x														
- .6	5		5																			
-1.1	14		9					xxx								x						x
-1.5	3	#	1		x	x		x														x
-1.9	2		2																			
Total	71		48	0	2	3	1	15	0	3	0	0	0	0	0	1	2	0	0	0	2	
Elimin.	10		8					x									x					
Ret. (no flight records)	12	#	8		x		x	x		x							x					

#One or more cases with multiple defect.

APPENDIX 7

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES IN TERMS OF CRITERIA DISTRIBUTIONS (Elementary Students)

Appendix 7a: Clewiston, Florida
Appendix 7b: Miami, Oklahoma
Appendix 7c: Terrell, Texas
Appendix 7d: Mesa, Arizona

APPENDIX 7a

TABLE 1

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "FLYING TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Flying Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.7	2	1				x		
-1.5	6	6						
-1.3	5	5						
-1.1	2	1				x		
-1.0	8	6				xx		
- .6	8	7				x		
- .3	3	3						
- .2	2	2						
- .1	4	4						
.1	4	3				x		
.2	12	10			x			x
.7	3	3						
.8	5	4				x		
1.1	9	6				xxx		
1.5	3	3						
1.6	4	3				x		
1.8	2	1				x		
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 2

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Ground Exam Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.8	2	1				x		
-1.7	3	2				x		
-1.6	2	2						
-1.5	2	1				x		
-1.4	1	0				x		
-1.2	2	1				x		
-1.1	2	2						
-1.0	3	3						
- .9	2	2						
- .8	2	2						
- .7	3	3						
- .6	1	1						
- .5	3	2				x		
- .4	2	2						
- .3	3	3						
- .2	3	3						
- .1	2	2						
0	3	3						
.1	2	2						
.2	4	3				x		
.3	2	1				x		
.4	3	3						
.5	3	3						
.6	2	2						
.7	2	2						
.8	2	1						x
.9	2	1			x			
1.0	2	2						
1.1	3	1				xx		
1.2	3	2				x		
1.3	2	2						
1.4	3	3						
1.5	2	2						
1.6	2	2						
1.7	2	1				x		
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test.
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 3

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Character and Leadership	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.6	1	1						
-1.5	4	3				x		
-1.4	1	1						
-1.3	4	2				x		x
-1.2	5	3				xx		
-1.0	2	2						
- .9	2	2						
- .8	5	4				x		
- .6	3	3						
- .5	11	11						
0	2	2						
.1	1	1						
.2	6	5				x		
.4	10	8				xx		
.8	2	1			x			
.9	3	3						
1.0	4	3				x		
1.2	1	1						
1.3	6	4				xx		
1.5	2	2						
1.6	2	1				x		
1.7	3	3						
1.8	2	2						
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 4

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GENERAL TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	General Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.3	2	1				x		
1.5	13	12				x		
.8	18	15				xxx		
- .6	27	23			x	xx		x
- .8	12	9				xxx		
-1.2	10	8				xx		
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 5

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "INSTRUMENT TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.5	2	1				x		
1.9	2	2						
1.3	13	13						
1.2	1	1						
.4	24	20				xxxx		
- .6	16	13			x	x		x
-1.0	15	11				xxxx		
-1.3	8	7				x		
-1.8	1	0				x		
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 6

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "LINK TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Link Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.5	1	1						
2.2	1	0				x		
2.0	1	1						
1.8	1	1						
1.6	2	2						
1.4	2	1				x		
1.3	3	3						
1.1	2	1				x		
.9	3	3						
.7	6	6						
.5	6	5						x
.3	7	6			x			
.1	7	6				x		
0	5	3				xx		
- .2	5	4				x		
- .4	5	4				x		
- .6	5	5						
- .8	4	4						
-1.0	4	3				x		
-1.1	2	2						
-1.3	3	3						
-1.5	2	2						
-1.7	1	0				x		
-1.9	3	2				x		
-2.1	1	0				x		
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 7

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "NIGHT TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Night Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	2	1				x		
1.6	1	1						
1.5	13	13						
.5	26	21				xxxxx		
- .6	17	14			x	x		x
- .9	16	12				xxxx		
-1.3	6	5				x		
-1.8	1	1						
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 8

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "DUAL TO 1st SOLO (DAY) TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Day Dual to 1st Solo	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
6.7	1	1						
1.8	1	1						
1.5	1	1						
1.2	2	2						
1.0	2	2						
.9	2	2						
.8	3	2				x		
.7	1	1						
.6	2	1				x		
.5	4	2			x	x		
.4	2	2						
.3	5	5						
.2	6	4				xx		
.1	3	2				x		
0	6	5				x		
-.1	5	5						
-.2	7	7						
-.3	4	4						
-.4	4	4						
-.6	3	3						
-.7	2	2						
-.8	3	2				x		
-.9	2	1				x		
-1.0	6	3				xx		x
-1.2	4	3				x		
-1.3	1	1						
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

TABLE 9

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Clewiston, Florida*

Standard Score	Day Total Dual	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.3	1	1						
2.1	1	0				x		
2.0	2	2						
1.9	1	1						
1.8	1	1						
1.7	1	1						
1.6	1	1						
1.5	1	1						
1.4	1	1						
1.1	4	4						
1.0	3	3						
.9	1	1						
.7	1	1						
.6	1	1						
.4	3	2			x			
.3	4	3				x		
.2	7	7						
.1	7	5				xx		
0	3	3						
- .1	4	3				x		
- .2	6	3				xxx		
- .3	3	1				xx		
- .4	2	2						
- .5	2	1				x		
- .6	2	2						
- .7	2	2						
- .8	1	1						
- .9	2	2						
-1.0	3	3						
-1.1	1	0				x		
-1.3	2	2						
-1.4	2	2						
-1.5	1	1						
-1.7	1	0						x
-1.8	1	1						
-1.9	1	1						
-2.0	1	1						
-2.2	1	1						
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained 111 total

TABLE 10

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "SUITABILITY TEST" DISTRIBUTION
Clewiston, Florida*

			Systolic				Diastolic	
	Suitability	No Disability	140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3								
311	1	1						
321	1	1						
131	1	1						
231	3	2				x		
232	1	1						
213	1	1						
2								
200	3	3						
201	2	1			x			
210	7	6				x		
211	12	12						
212	4	4						
221	2	2						
120	4	3				x		
121	10	7				xx		x
122	5	3				xx		
112	1	1						
1								
100	6	4				xx		
101	5	4				x		
110	7	6				x		
111	2	1				x		
010	1	1						
001	2	2						
011	1	1						
Total	82	68	0	0	1	12	0	1
Omitted	1	1						
Eliminated (no flight records)	12	10				xx		

*Clewiston cases - 82 retained
1 retained having a medical and flight record was omitted because pilot was not given a "Night" test.
12 eliminated (have medical records)
6 eliminated (no medical records)
10 retained (no medical records)
111 total

APPENDIX 7b

TABLE 11

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "FLYING TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Flying Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.7	1	1						
-1.6	2	2						
-1.5	3	2		x				
-1.4	2	1		x				
-1.3	3	3						
-1.2	3	3						
-1.1	5	3	xx					
- .9	2	2						
- .8	4	2		x		x		
- .7	1	1						
- .6	4	4						
- .5	1	1						
- .4	2	2						
- .3	3	2	x					
- .2	3	2				x		
- .1	2	2						
0	2	2						
.1	4	4						
.2	3	2				x		
.3	2	1		x				
.4	3	2						x
.5	2	2						
.6	3	2	x					
.8	3	2		x				
.9	3	2				x		
1.0	3	3						
1.1	3	2	x					
1.2	3	3						
1.4	4	4						
1.5	3	3						
1.6	3	3						
1.7	2	2						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained	1	1						
(no flight records)								

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 12

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Ground Exam Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 94 & over	Diastolic 85 to 89
1.8	1	0		x				
-1.7	3	1		xx				
-1.6	2	2						
-1.5	2	2						
-1.4	2	2						
-1.3	3	3						
-1.2	3	2						x
-1.1	3	2		x				
-1.0	3	2				x		
- .9	1	1						
- .8	2	2						
- .7	4	3	x					
- .6	2	1				x		
- .5	3	3						
- .4	2	2						
- .3	1	1						
- .2	3	3						
- .1	2	2						
0	3	3						
.1	2	1	x					
.2	3	3						
.3	2	2						
.4	3	3						
.5	3	2	x					
.6	2	2						
.7	4	4						
.8	2	2						
.9	2	1	x					
1.0	3	2				x		
1.1	2	1				x		
1.2	3	2	x					
1.3	3	3						
1.4	3	2		x				
1.5	2	2						
1.6	3	3						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained	1	1						
(no flight records)								

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 13

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Character and Leadership	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.6	1	0				x		
-1.5	5	5						
-1.3	5	5						
-1.1	11	9		x		x		
- .6	8	6		x				x
- .3	5	3	xx					
- .1	12	10	xx					
.4	9	7		x		x		
.8	17	14		xx		x		
1.4	6	6						
1.7	6	6						
1.9	2	1	x					
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxx	
Retained (no flight records)	1	1						

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 14

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GENERAL TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	General Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.2	1	1						
1.8	1	1						
1.7	2	1		x				
1.5	2	2						
1.4	3	3						
1.3	6	6						
1.1	3	1	x			x		
1.0	1	1						
.8	1	1						
.7	3	2		x				
.6	3	1	x	x				
.5	2	2						
.4	1	1						
.3	5	4				x		
.2	3	3						
.1	5	5						
- .1	5	5						
- .2	2	1				x		
- .3	7	4	xx					x
- .4	1	1						
- .5	3	2		x				
- .6	3	3						
- .7	2	1	x					
- .9	5	4		x				
-1.0	2	2						
-1.1	5	4				x		
-1.3	4	4						
-1.4	1	1						
-1.5	1	1						
-1.7	2	2						
-1.8	1	1						
-2.6	1	1						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxx	
Retained	1	1						
(no flight records)								

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 15

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "INSTRUMENT TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Instrument Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.8	1	1						
2.2	2	2						
1.9	1	1						
1.6	2	2						
1.3	5	1	xx	xx				
1.0	5	5						
.7	9	7		x		x		
.4	11	9	x	x				
.1	10	10						
- .2	9	7				x		x
- .5	11	9		x		x		
- .8	9	7	x			x		
-1.1	5	5						
-1.4	3	3						
-1.7	2	1	x					
-2.0	1	1						
-3.2	1	1						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxx	
Retained	1	1						
(no flight records)								

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 16

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "LINK TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.8	5	4				x		
1.0	6	6						
.7	32	24	xxx	xxx		x		x
- .1	9	9						
- .4	14	11	x	xx				
-1.2	15	13	x			x		
-1.9	5	4				x		
-3.0	1	1						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained (no flight records)	1	1						

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 17

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "NIGHT TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Night Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.4	1	0	x					
2.2	1	1						
2.1	1	0		x				
1.8	2	2						
1.6	1	0				x		
1.2	8	8						
1.1	3	3						
.9	1	1						
.6	8	6	x	x				
.5	1	1						
.4	2	2						
.2	1	1						
0	22	14	xxx	x		xxx		x
- .1	6	5		x				
- .2	2	2						
- .3	1	1						
- .4	1	1						
- .6	10	9		x				
- .8	1	1						
-1.1	6	6						
-1.3	1	1						
-1.7	4	4						
-2.3	3	3						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained	1	1						
(no flight records)								

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 18

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "DUAL TO 1st SOLO (DAY) TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Day Dual to 1st Solo	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.9	2	2						
2.4	1	1						
2.0	1	0				x		
1.8	1	1						
1.5	1	0				x		
1.4	1	1						
1.3	3	3						
1.2	4	4						
.9	4	3		x				
.8	3	2				x		
.7	2	2						
.6	2	2						
.4	4	4						
.3	2	2						
.2	6	4	x	x				
0	3	3						
- .1	4	2	xx					
- .2	8	6	x	x				
- .3	6	6						
- .4	3	3						
- .5	1	1						
- .6	1	1						
- .7	2	0		x		x		
- .8	2	1	x					
- .9	3	2		x				
-1.0	1	1						
-1.1	2	2						
-1.2	2	2						
-1.3	8	7						x
-1.5	3	3						
None	1	1						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained (no flight records)	1	1						

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight records)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

TABLE 19

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Miami, Oklahoma*

Standard Score	Day Total Dual	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
3.2	1	1						
3.1	1	1						
2.4	1	1						
2.1	1	1						
2.0	1	1						
1.9	1	0	x					
1.7	2	0		xx				
1.4	1	1						
1.3	2	1	x					
1.2	1	1						
1.1	1	0		x				
1.0	1	1						
.8	2	2						
.7	1	0				x		
.6	6	5				x		
.5	2	2						
.4	5	4	x					
.3	1	1						
.2	2	1		x				
.1	2	2						
0	4	4						
- .1	5	3	x			x		
- .2	1	0						x
- .3	5	5						
- .4	7	7						
- .5	3	3						
- .6	5	4		x				
- .7	6	6						
- .8	3	3						
- .9	2	2						
-1.0	3	2				x		
-1.1	3	3						
-1.3	1	1						
-1.4	1	1						
-1.5	1	0	x					
-1.9	1	1						
None	1	1						
Total	87	72	5	5	0	4	0	1
Eliminated	11	7	x	x			xxxx	
Retained (no flight records)	1	1						

*Miami cases - 87 retained
11 eliminated (have medical records)
1 retained (no flight record)
3 eliminated (no medical records)
10 retained (no medical records)
112 total

APPENDIX 7c

TABLE 20

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "FLYING TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.7	1	0	x					
-1.6	3	3						
-1.5	2	2						
-1.4	2	2						
-1.3	5	4		x				
-1.2	1	1						
-1.1	2	2						
-1.0	4	3		x				
- .9	2	2						
- .8	2	2						
- .7	2	1		x				
- .6	3	3						
- .5	3	3						
- .4	3	3						
- .3	2	1	x					
- .2	3	3						
- .1	2	2						
0	1	1						
.1	5	5						
.3	4	4						
.4	2	2						
.5	3	3						
.6	1	1						
.7	3	3						
.8	3	2		x				
.9	1	1						
1.0	3	3						
1.1	3	3						
1.2	2	2						
1.3	2	2						
1.4	3	3						
1.5	1	1						
1.6	3	3						
1.7	2	1		x				
1.8	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3				1	1	

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 21

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Ground Exam Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.8	2	2						
-1.6	2	2						
-1.5	4	4						
-1.4	1	1						
-1.3	3	3						
-1.2	3	3						
-1.1	2	2						
-1.0	3	2	x					
- .9	3	3						
- .8	2	2						
- .7	3	3						
- .6	1	1						
- .5	3	3						
- .4	5	4		x				
- .3	2	2						
- .2	2	1	x					
- .1	2	2						
0	3	3						
.1	3	2		x				
.2	2	2						
.3	2	2						
.4	3	1		xx				
.5	2	2						
.6	2	2						
.7	2	2						
.8	2	2						
.9	3	3						
1.0	2	2						
1.1	3	3						
1.2	3	2		x				
1.3	2	2						
1.4	1	1						
1.5	2	2						
1.6	2	2						
1.7	1	1						
1.8	1	1						
1.9	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 22

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Character and Leadership	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.6	2	1		x				
-1.5	2	2						
-1.4	2	2						
-1.3	4	4						
-1.2	2	1	x					
-1.1	3	3						
-1.0	3	3						
- .9	2	2						
- .8	16	16						
- .1	2	2						
0	1	1						
.1	16	14		xx				
.7	2	2						
.8	10	9		x				
1.0	2	2						
1.2	2	1		x				
1.3	1	1						
1.4	9	9						
1.8	1	0	x					
1.9	1	1						
2.0	2	2						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained	3	3						
(no flight records)								

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 23

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GENERAL TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	General	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.1	1	1						
1.9	1	1						
1.8	2	1	x					
1.7	2	2						
1.6	3	3						
1.4	1	1						
1.3	1	1						
1.0	5	5						
.9	3	3						
.8	1	0		x				
.7	2	2						
.6	3	2		x				
.5	6	6						
.4	3	2		x				
.3	2	1	x					
.2	3	3						
.1	1	1						
0	5	5						
-.1	2	2						
-.2	5	5						
-.3	3	3						
-.4	4	4						
-.5	1	1						
-.6	6	6						
-.8	4	3		x				
-.9	3	3						
-1.0	2	2						
-1.4	1	1						
-1.5	3	3						
-1.6	1	1						
-1.8	1	0		x				
-1.9	2	2						
-2.1	1	1						
-2.2	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 24

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "INSTRUMENT TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.3	1	1						
2.1	4	2	x	x				
1.9	1	1						
1.8	1	1						
1.5	1	1						
1.2	1	1						
1.1	3	3						
.8	2	2						
.7	3	2		x				
.6	2	2						
.5	5	4	x					
.4	7	6		x				
.3	2	2						
.2	8	8						
.1	2	2						
0	5	5						
- .1	3	3						
- .2	7	6		x				
- .3	4	4						
- .4	3	3						
- .6	5	5						
- .7	1	1						
- .9	1	1						
-1.0	3	3						
-1.2	2	2						
-1.3	1	1						
-1.4	1	1						
-1.5	1	1						
-1.8	2	2						
-1.9	1	1						
-2.4	1	0		x				
-3.0	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 25

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "LINK TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3.0	1	1						
2.4	2	2						
1.8	3	3						
1.2	6	6						
.6	19	18	x					
0	25	21	x	xxx				
- .6	12	10		xx				
-1.2	13	13						
-1.8	3	3						
-2.4	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 26

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "NIGHT TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Night Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
1.9	1	1						
1.7	1	0		x				
1.6	5	4	x					
1.4	2	2						
1.2	6	5		x				
.9	4	4						
.7	2	1		x				
.6	4	4						
.2	7	7						
- .1	15	14		x				
- .3	14	13	x					
- .4	2	2						
- .6	4	4						
- .8	4	3		x				
-1.0	1	1						
-1.1	4	4						
-1.3	1	1						
-1.5	1	1						
-1.6	2	2						
-1.8	1	1						
-2.0	2	2						
-2.8	2	2						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 27

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Terrell, Texas*

Standard Score	Day Dual to 1st Solo	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.6	1	1						
2.5	1	0	x					
2.2	1	1						
2.0	2	2						
1.9	1	1						
1.7	1	0		x				
1.6	1	1						
1.3	1	1						
1.2	1	1						
1.1	3	3						
1.0	1	0	x					
.9	1	1						
.8	3	3						
.7	5	5						
.6	2	1		x				
.5	2	2						
.4	3	3						
.2	2	1		x				
.1	3	3						
0	1	1						
- .1	2	2						
- .2	2	2						
- .3	4	4						
- .4	6	6						
- .5	3	3						
- .6	4	4						
- .7	7	6		x				
- .8	2	2						
- .9	4	4						
-1.0	5	4		x				
-1.1	5	5						
-1.2	2	2						
-1.5	1	1						
-1.7	1	1						
-2.2	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 28

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF TOTAL DUAL (DAY) TEST DISTRIBUTION
Terrell, Texas*

Standard Score	Day Total Dual	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.4	1	1						
2.3	1	1						
2.2	2	1	x					
2.1	1	1						
1.9	1	1						
1.7	1	1						
1.4	1	1	x					
1.2	2	2						
1.0	1	1						
.9	2	2						
.8	2	2						
.7	4	4						
.6	2	2						
.5	3	2	x					
.4	3	3						
.3	3	3						
.2	5	4		x				
.1	2	0		xx				
0	4	4						
- .1	6	6						
- .2	4	4						
- .3	3	2		x				
- .4	5	5						
- .5	2	1		x				
- .6	2	2						
- .7	1	1						
- .8	4	4						
- .9	4	4						
-1.0	2	2						
-1.1	1	1						
-1.2	2	2						
-1.3	2	2						
-1.4	1	1						
-1.5	1	1						
-1.8	1	1						
-1.9	2	2						
-2.6	1	1						
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

TABLE 29

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "SUITABILITY TEST" DISTRIBUTION
Terrell, Texas*

			Systolic				Diastolic	
	Suit-ability	No Disability	140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3								
310	1	1						
130	4	3		x				
133	1	1						
230	2	2						
123	1	1						
2								
200	4	4						
201	2	2						
210	12	10	x	x				
211	12	12						
212	1	1						
220	3	3						
221	5	5						
222	1	1						
120	4	4						
121	10	9		x				
122	2	2						
112	1	1						
1								
100	9	8		x				
101	1	1						
110	7	6		x				
111	1	1						
010	1	0	x					
Total	85	78	2	5	0	0	0	0
Eliminated	13	13						
Retained (no flight records)	3	3						

*Terrell cases - 85 retained
13 eliminated (have medical records)
3 retained (no flight records)
3 eliminated (no medical records)
7 retained (no medical records)
111 total

APPENDIX 7d

TABLE 30

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Flying Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.7	3	2		x				
-1.6	3	1	x	x				
-1.5	2	2						
-1.4	3	2	x					
-1.3	2	2						
-1.2	2	2						
-1.1	3	2		x				
-1.0	3	2	x					
- .9	1	1						
- .8	3	1	xx					
- .7	3	3						
- .6	3	1	x					x
- .5	2	2						
- .4	2	2						
- .3	2	2						
- .2	4	4						
- .1	2	2						
0	2	2						
.1	3	2	x					
.2	1	1						
.3	3	2		x				
.4	2	2						
.5	4	3	x					
.6	4	2	x	x				
.7	1	1						
.8	3	2	x					
.9	3	2	x					
1.0	2	1	x					
1.1	2	2						
1.2	3	3						
1.3	3	3						
1.4	2	2						
1.5	2	2						
1.6	2	2						
1.7	2	1	x					
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

TABLE 31

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GROUND EXAM TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Ground Exam Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	1						
-1.7	2	2						
-1.6	2	1	x					
-1.5	2	2						
-1.4	3	2	x					
-1.3	3	2		x				
-1.2	3	0	xx					x
-1.1	3	3						
-1.0	2	2						
- .9	3	1	xx					
- .7	3	3						
- .6	3	2	x					
- .5	3	3						
- .4	4	4						
- .3	2	2						
- .2	2	2						
- .1	2	2						
0	2	1		x				
.1	1	1						
.2	3	2	x					
.3	3	2		x				
.4	4	4						
.5	2	2						
.6	2	1	x					
.7	2	2						
.8	3	3						
.9	5	5						
1.0	1	1						
1.1	2	2						
1.2	2	2						
1.3	3	2	x					
1.4	3	1	x	x				
1.5	3	0	xx	x				
1.6	2	2						
1.7	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 32

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "CHARACTER AND LEADERSHIP TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Character and Leadership	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.7	2	1	x					
-1.6	2	2						
-1.5	3	3						
-1.4	2	1		x				
-1.3	2	2						
-1.2	3	3						
-1.1	3	2		x				
-1.0	5	3	x	x				
- .9	1	1						
- .8	4	3	x					
- .6	3	3						
- .5	2	2						
- .4	3	2	x					
- .3	2	1	x					
- .2	3	2	x					
- .1	2	2						
0	3	2		x				
.1	2	1	x					
.2	3	3						
.3	3	1	xx					
.4	2	2						
.5	4	3	x					
.7	5	4	x					
.8	3	3						
.9	3	3						
1.0	1	0	x					
1.1	2	2						
1.2	2	1	x					
1.3	3	2		x				
1.4	1	1						
1.5	2	1						x
1.6	2	2						
1.7	3	3						
1.8	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 33

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "GENERAL TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	General Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.0	1	0		x				
1.8	2	2						
1.6	2	1	x					
1.3	8	7		x				
1.1	1	0	x					
1.0	3	2	x					
.9	5	4		x				
.7	3	3						
.6	5	2	xxx					
.4	2	2						
.1	11	9	x					x
- .1	2	2						
- .2	1	1						
- .3	1	1						
- .4	1	1						
- .5	3	2	x					
- .6	13	11	x	x				
- .7	1	1						
- .8	3	1	x	x				
- .9	2	1	x					
-1.0	1	0	x					
-1.1	7	7						
-1.3	2	2						
-1.4	1	1						
-1.5	1	1						
-1.9	1	1						
-2.0	4	3	x					
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 34

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "INSTRUMENT TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.9	1	0		x				
1.6	8	5	xx	x				
1.2	4	4						
1.0	1	1						
.7	12	11		x				
.5	1	1						
.3	6	5	x					
.2	4	2	x					x
0	4	3	x					
- .2	6	3	x	xx				
- .4	18	15	xxx					
- .6	4	2	xx					
- .8	1	1						
- .9	2	2						
-1.0	1	1						
-1.1	6	5	x					
-1.3	1	0	x					
-1.5	5	5						
-2.7	1	1						
-3.7	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 35

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "LINK TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	2	1						x
1.9	1	1						
1.5	1	1						
1.2	5	4		x				
.8	9	6	xxx					
.6	12	10		xx				
.3	6	5	x					
.1	9	7	xx					
- .1	10	9	x					
- .4	9	8	x					
- .6	6	4	xx					
- .8	3	1	xx					
-1.0	7	5	x	x				
-1.7	1	1						
-2.0	1	1						
-2.2	3	2		x				
-2.6	1	1						
-3.3	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained	6	4	x		x			
(no flight records)								

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 36

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "NIGHT TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Night Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.3	2	0	x	x				
1.6	6	5		x				
.9	15	12	xx					x
.8	1	1						
.7	1	0	x					
.4	1	1						
.2	20	16	xxxx					
- .3	1	0	x					
- .4	21	17	xxx	x				
- .8	2	2						
-1.0	1	1						
-1.1	10	9		x				
-1.8	5	4		x				
-3.2	1	0	x					
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 37

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "DUAL TO FIRST SOLO (DAY) TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Day Dual to 1st Solo	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
2.6	1	1						
2.1	2	2						
2.0	1	1						
1.9	2	2						
1.8	1	1						
1.6	3	2	x					
1.4	1	0	x					
1.0	1	1						
.9	4	2		xx				
.8	3	3						
.7	1	1						
.5	4	1	xxx					
.4	1	1						
.3	1	1						
.2	2	1	x					
.1	5	4						x
0	3	2	x					
- .1	6	6						
- .2	7	6	x					
- .3	3	3						
- .4	10	8	xx					
- .5	8	8						
- .6	1	1						
- .7	1	1						
- .8	7	4	xx	x				
-1.0	2	1	x					
-1.3	2	1		x				
-1.7	1	1						
-2.1	2	1		x				
-3.7	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained	6	4	x		x			
(no flight records)								

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 38

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "TOTAL DUAL (DAY) TEST" DISTRIBUTION
Mesa, Arizona*

Standard Score	Day Total Dual	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
3.6	1	0	x					
2.5	1	0	x					
2.2	1	0	x					
2.0	1	1						
1.8	1	1						
1.5	2	2						
1.4	1	1						
1.2	2	2						
1.1	1	0		x				
.9	1	0	x					
.8	3	3						
.7	2	2						
.6	7	6	x					
.5	4	3		x				
.3	2	2						
.2	3	3						
.1	3	1	x					x
0	3	3						
- .1	5	5						
- .2	2	1		x				
- .3	5	4	x					
- .4	7	6	x					
- .5	10	8	x	x				
- .7	3	3						
- .8	2	1	x					
- .9	1	1						
-1.0	4	2	x	x				
-1.1	3	3						
-1.2	1	1						
-1.4	1	1						
-1.6	1	0	x					
-2.2	2	1	x					
-2.7	1	1						
Total	87	68	13	5	0	0	0	1
Eliminated	5	5						
Retained (no flight records)	6	4	x		x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
12 retained (no medical records)
2 eliminated (no medical records)
112 total

TABLE 39

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "SUITABILITY TEST" DISTRIBUTION
Mesa, Arizona*

Suitability	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
3							
322	1	0	x				
231	1	1					
232	1	1					
123	1	1					
2							
210	2	2					
211	10	8	x	x			
212	7	5		xx			
220	3	2	x				
221	11	8	xx	x			
222	3	3					
121	13	9	xxx				x
1							
100	5	5					
101	2	2					
110	12	11	x				
111	10	6	xxx	x			
010	4	3	x				
011	1	1					
Total	87	68	13	5	0	0	0	1
Eliminated	5	5					
Retained (no flight records)	6	4	x	x			

*Mesa cases - 87 retained
5 eliminated (have medical records)
6 retained (no flight records)
2 eliminated (no medical records)
12 retained (no medical records)
112 total

STANDARDS OF PHYSICAL EXAMINATION FOR FLYING

Visual Disqualification

Army Regulations No. 40-110 (Most recent standards)	Standards Used to Represent Stricter Interpretation (Conform to 1938 Navy Standards)
Visual Acuity: R.E. & L.E. - less than 20/20 for each eye	Less than 20/20 for each eye
Depth Perception: 31 or more	26 or more
Heterophoria at 6 meters:	
Esophoria - 10 or more	5 or more
Exophoria - 6 or more	3 or more
R.H. and L.H. - 2 or more	2 or more
Prism Divergence: 16 or more and 2 or less	10 or more and 1 or less
Angle of Convergence: PoB. & Pd. - the distance from the base line to the near point of convergence (PoB.) must not exceed the inter-pupillary distance by more than 25 millimeters	Angle of Convergence = $\frac{1/2\ Pd \times 100}{PoB.}$ smaller than 40° is disqualifying
Accommodation: Rt. & Lt. - more than 3 diopters below the mean for the examinee's age in either eye	average age - 25 years 7.1 or less and 13.3 or more

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APPENDIX 8

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES IN TERMS OF CRITERIA DISTRIBUTIONS (Advanced Students)

Appendix 8a: Clewiston, Florida
Appendix 8b: Miami, Oklahoma
Appendix 8c: Terrell, Texas
Appendix 8d: Mesa, Arizona

APPENDIX 8a

TABLE 1

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.6	1	1						
-1.5	3	1				xx		
-1.3	1	1						
-1.2	3	2				x		
-1.0	7	7						
- .7	6	6						
- .4	3	2				x		
- .3	9	7				xx		
.3	9	7			x	x		
.8	7	6				x		
1.2	4	2				x		x
1.4	4	4						
1.6	3	2				x		
1.8	2	2						
1.9	1	0				x		
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 2

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Ground Exam Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	2	1				x		
-1.7	2	1				x		
-1.5	3	3						
-1.4	2	1				x		
-1.3	1	1						
-1.2	1	1						
-1.0	2	2						
- .9	2	2						
- .8	1	0				x		
- .7	1	1						
- .6	2	1				x		
- .5	2	1				x		
- .4	2	1				x		
- .3	2	2						
- .2	3	2			x			
- .1	1	1						
0	5	5						
.2	2	1				x		
.3	2	2						
.4	2	2						
.5	3	3						
.6	1	1						
.7	1	1						
.8	2	2						
.9	2	2						
1.0	2	2						
1.1	2	1				x		
1.2	1	1						
1.3	2	2						
1.4	3	1				x		x
1.5	1	1						
1.7	3	2				x		
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 3

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Clewiston, Florida

Standard Score	Char. and Lead.	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	1						
-1.7	2	2						
-1.6	2	2						
-1.5	1	0				x		
-1.4	1	1						
-1.3	2	1				x		
-1.2	1	1						
-1.1	2	1				x		
- .9	5	3				x		x
- .7	4	3				x		
- .5	1	1						
- .4	3	2				x		
- .3	2	2						
- .2	2	1			x			
- .1	2	2						
.1	3	3						
.3	8	7				x		
.8	4	4						
.9	8	5				xxx		
1.3	1	1						
1.4	4	4						
1.6	2	2						
1.7	1	0				x		
1.8	1	1						
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 4

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	General Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.6	1	1						
2.2	1	1						
1.8	2	1				x		
1.7	1	1						
1.4	1	1						
1.3	1	0				x		
1.2	1	1						
1.1	1	1						
1.0	1	0				x		
.9	1	1						
.8	1	1						
.7	1	1						
.6	4	2				xx		
.5	6	6						
.3	2	2						
.2	1	0			x			
.1	4	4						
0	2	2						
- .1	2	2						
- .2	5	5						
- .3	3	3						
- .4	1	0				x		
- .5	2	2						
- .6	1	0				x		
- .7	2	2						
- .8	2	2						
- .9	2	0				x		x
-1.0	2	2						
-1.1	3	1				xx		
-1.3	1	1						
-1.4	1	1						
-1.6	2	2						
-2.1	1	1						
-2.3	1	0				x		
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 5

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.0	1	1						
1.6	1	1						
1.5	1	1						
1.4	1	0				x		
1.3	2	2						
1.2	2	1				x		
1.1	4	3				x		
.9	2	2						
.8	2	2						
.7	2	2						
.6	2	1				x		
.5	2	0			x	x		
.4	2	1				x		
.3	1	1						
.2	1	1						
.1	4	3				x		
0	3	3						
-.1	1	1						
-.2	4	3				x		
-.3	2	1				x		
-.5	3	2				x		
-.6	2	2						
-.7	3	3						x
-.8	1	0						
-.9	3	3						
-1.1	3	3						
-1.2	2	2						
-1.5	1	1						
-1.7	1	1						
-1.9	1	1						
-2.0	2	2						
-2.4	1	0				x		
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained (no flight records)	2	2						
Retained	1	1						

TABLE 6

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "LINK TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.9	1	1						
1.8	1	1						
1.6	3	2				x		
1.5	4	3				x		
1.3	2	2						
1.2	1	1						
1.0	3	2				x		
.9	2	1				x		
.8	2	2						
.6	1	1						
.5	2	2						
.3	3	2						x
.2	3	3						
0	6	6						
- .1	3	2			x			
- .3	2	2						
- .4	2	2						
- .6	3	3						
- .7	2	2						
- .9	2	2						
-1.0	4	2				xx		
-1.2	5	2				xxx		
-1.3	3	1				xx		
-1.5	2	2						
-1.6	1	1						
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 7

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Night Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.7	1	1						
1.6	4	4						
1.3	1	0				x		
1.1	8	6				xx		
.9	1	1						
.7	2	2						
.5	4	3				x		
.3	4	4						
.2	3	3						
0	4	3				x		
- .2	8	7				x		
- .4	4	2				xx		
- .6	4	2				x		x
- .8	5	4				x		
- .9	3	3						
-1.1	2	1			x			
-1.3	1	1						
-1.7	1	1						
-1.9	1	1						
-2.1	1	1						
-2.8	1	0				x		
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

TABLE 8

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Clewiston, Florida

Standard Score	Applied Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.9	1	1						
1.8	1	0				x		
1.7	1	1						
1.6	1	1						
1.4	1	1						
1.3	1	1						
1.2	2	2						
1.1	2	0				xx		
.9	3	3						
.8	2	2						
.7	1	1						
.5	5	4				x		
.4	6	5						x
.3	2	2						
.2	2	1				x		
0	3	3						
- .1	2	2						
- .2	4	4						
- .3	2	2						
- .5	4	4						
- .6	2	2						
- .7	3	2				x		
-1.0	1	0				x		
-1.1	3	1				xx		
-1.2	1	1						
-1.4	1	1						
-1.6	1	1						
-1.7	1	0				x		
-1.9	1	0				x		
-2.0	1	1						
-2.1	1	1						
-2.4	1	0			x			
Total	63	50	0	0	1	11	0	1
Elimin.	17	16				x		
Retained	2	2						
(no flight records)								
Retained	1	1						

APPENDIX 8b

TABLE 6

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Flying Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.8	1	0		x				
-1.6	3	3						
-1.5	2	1						x
-1.4	3	3						
-1.3	2	2						
-1.2	2	2						
-1.1	1	1						
-1.0	2	2						
- .9	2	1		x				
- .8	2	2						
- .7	2	2						
- .6	4	4						
- .5	2	1		x				
- .4	2	0	xx					
- .3	3	3						
- .2	1	1						
- .1	2	1		x				
0	2	1		x				
.1	1	1						
.2	3	3						
.3	5	4				x		
.5	4	4						
.6	2	0	xx					
.7	2	2						
.8	2	2						
.9	2	1				x		
1.0	4	3	x					
1.1	1	1						
1.2	3	3						
1.3	2	2						
1.4	1	1						
1.5	2	2						
1.6	3	3						
1.7	2	1				x		
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained (no flight records)	2	2						

TABLE 10

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Ground Exam Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	0		x				
-1.7	2	0		xx				
-1.6	2	2						
-1.5	2	2						
-1.4	3	3						
-1.3	2	2						
-1.2	2	0		x				x
-1.1	2	2						
-1.0	2	2						
- .9	2	2						
- .8	2	2						
- .6	3	2				x		
- .5	3	2	x					
- .4	1	1						
- .3	3	2	x					
- .2	3	3						
- .1	2	2						
0	2	1				x		
.1	3	3						
.2	2	2						
.3	3	3						
.4	2	2						
.5	3	3						
.6	1	1						
.7	4	2	xx					
.8	1	1						
.9	2	2						
1.0	2	2						
1.1	3	3						
1.2	1	0	x					
1.3	3	2				x		
1.4	3	2		x				
1.5	1	1						
1.6	3	3						
1.7	1	1						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 11

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF "CHARACTER AND LEADERSHIP" DISTRIBUTION
Miami, Oklahoma

Standard Score	Char. and Lead.	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.7	1	1						
-1.6	3	3						
-1.5	3	1		x		x		
-1.4	1	1						
-1.3	4	3		x				
-1.1	3	2		x				
-1.0	4	4						
- .8	6	3		x		xx		
- .5	10	9						x
0	11	7	xxx	x				
.5	7	6	x					
.8	5	5						
1.0	12	11	x					
1.5	2	2						
1.7	4	4						
1.9	1	1						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 12

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	General Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.9	3	2		x				
1.5	1	1						
1.4	4	4						
1.3	2	1						x
1.2	1	1						
1.1	3	3						
.9	4	2	xx					
.8	2	2						
.7	2	1		x				
.5	3	2		x				
.4	1	1						
.3	1	1						
.2	4	4						
.1	6	6						
0	5	2		xx		x		
- .1	2	2						
- .2	3	3						
- .3	3	1	xx					
- .4	2	2						
- .5	1	1						
- .6	5	5						
- .7	3	2				x		
- .8	2	2						
- .9	1	1						
-1.1	4	2	x			x		
-1.2	1	1						
-1.5	1	1						
-1.6	1	1						
-1.7	1	1						
-1.8	2	2						
-1.9	1	1						
-2.0	1	1						
-2.5	1	1						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 13

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.9	1	1						
1.8	1	1						
1.7	1	0						x
1.6	1	1						
1.5	2	2						
1.2	4	1	x	xx				
1.0	1	1						
.9	3	3						
.8	4	4						
.7	3	3						
.6	3	2		x				
.5	1	1						
.4	2	2						
.3	6	5	x					
.2	4	3		x				
.1	3	3						
0	8	8						
- .2	5	3	x			x		
- .3	3	2	x					
- .4	4	4						
- .5	3	3						
- .8	2	1		x				
- .9	1	1						
-1.0	2	2						
-1.3	1	0				x		
-1.4	1	1						
-1.5	1	1						
-1.6	1	1						
-1.7	1	1						
-1.9	1	1						
-2.4	1	1						
-2.6	1	0	x					
-3.3	1	0				x		
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 14

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "LINK TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3.0	1	0		x				
2.3	1	1						
2.1	2	1		x				
1.4	1	1						
1.2	3	3						
.9	6	5						x
.5	2	2						
.2	18	13	xx	x		xx		
0	9	8	x					
- .2	13	11	x	x				
- .5	3	2				x		
- .7	4	4						
- .9	7	6	x					
-1.2	1	1						
-1.4	2	1		x				
-1.6	2	2						
-3.2	2	2						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 15

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Night Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.7	1	1						
2.4	1	0				x		
1.7	2	2						
1.6	1	0		x				
1.5	1	1						
1.3	1	1						
1.2	1	1						
1.1	4	2	x	x				
.9	3	3						
.7	2	2						
.6	3	3						
.5	11	9		xx				
.4	2	1	x					
.3	1	1						
.2	1	1						
0	8	7	x					
- .1	3	2						x
- .3	2	2						
- .4	3	2	x					
- .5	4	3	x					
- .6	6	5		x				
- .7	2	1				x		
- .8	3	3						
- .9	1	1						
-1.0	2	2						
-1.1	3	2				x		
-1.8	1	1						
-2.3	4	4						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						
(no flight records)								

TABLE 16

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Miami, Oklahoma

Standard Score	Applied Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.6	1	1						
1.8	1	1						
1.7	7	6		x				
1.2	3	3						
1.0	3	3						
.8	2	1		x				
.7	3	2				x		
.6	1	0	x					
.5	2	2						
.4	1	1						
.3	4	3		x				
.2	3	2	x					
.1	2	2						
0	4	4						
- .2	4	3						x
- .3	2	1	x					
- .4	10	9	x					
- .5	1	1						
- .6	5	5						
- .7	2	1	x					
- .8	2	2						
- .9	1	0				x		
-1.0	2	1		x				
-1.1	3	2				x		
-1.3	2	2						
-1.4	1	1						
-1.5	1	0		x				
-1.7	1	1						
-1.8	2	2						
-2.2	1	1						
Total	77	63	5	5	0	3	0	1
Elimin.	9	8				x		
Retained	2	2						

(no flight records)

APPENDIX 8c

TABLE 17

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	1						
-1.7	2	2						
-1.6	1	1						
-1.5	4	4						
-1.4	1	1						
-1.3	3	3						
-1.2	3	3						
-1.0	2	2						
- .9	2	2						
- .8	2	2						
- .7	2	2						
- .6	1	1						
- .5	2	2						
- .4	2	2						
- .3	2	2						
- .2	3	3						
- .1	2	2						
0	2	2						
.1	2	1		x				
.2	3	3						
.3	1	0	x					
.4	3	2		x				
.5	3	2	x					
.6	3	3						
.7	2	2						
.8	3	2		x				
.9	3	3						
1.1	2	2						
1.2	3	3						
1.3	2	2						
1.4	2	2						
1.5	2	2						
1.6	2	2						
1.7	1	1						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 18

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Ground Exam Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	1						
-1.7	2	2						
-1.6	1	1						
-1.5	3	3						
-1.4	1	1						
-1.3	2	2						
-1.2	3	3						
-1.1	2	2						
-1.0	2	2						
- .9	3	2	x					
- .8	3	3						
- .7	2	2						
- .6	1	1						
- .5	2	2						
- .4	3	3						
- .3	1	1						
- .2	2	2						
- .1	3	3						
0	2	2						
.1	2	2						
.2	3	2		x				
.3	2	2						
.4	2	2						
.5	2	2						
.6	3	3						
.7	2	1		x				
.8	2	1	x					
.9	1	1						
1.0	3	3						
1.1	2	2						
1.2	1	1						
1.3	3	3						
1.4	2	2						
1.5	1	1						
1.6	2	1		x				
1.7	2	2						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 19

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Terrell, Texas

Standard Score	Char. and Lead.	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.7	1	1						
-1.6	2	2						
-1.5	2	2						
-1.4	3	3						
-1.3	2	2						
-1.2	3	2		x				
-1.1	2	2						
-1.0	1	0	x					
- .9	3	2		x				
- .8	2	2						
- .7	6	6						
- .4	4	4						
- .1	6	6						
.1	1	1						
.2	4	4						
.3	1	1						
.4	2	2						
.5	4	4						
.7	3	3						
.8	6	6						
1.1	4	4						
1.3	3	2		x				
1.4	4	4						
1.5	3	2	x					
1.7	2	2						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 20

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Terrell, Texas

Standard Score	General Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.2	2	2						
2.1	1	1						
1.6	2	2						
1.5	1	1						
1.4	1	1						
1.2	1	1						
1.0	2	2						
.9	3	3						
.7	5	4		x				
.6	4	4						
.5	3	3						
.4	2	2						
.3	2	2						
.1	4	3	x					
- .1	6	6						
- .2	9	8		x				
- .3	1	1						
- .4	1	1						
- .5	2	2						
- .6	2	2						
- .7	3	2	x					
- .8	1	1						
- .9	2	2						
-1.0	3	3						
-1.2	2	2						
-1.3	2	1		x				
-1.5	2	2						
-1.7	3	3						
-2.1	1	1						
-2.6	1	1						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 21

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.3	1	1						
2.1	1	1						
1.9	1	1						
1.7	2	2						
1.6	1	1						
1.5	1	1						
1.4	1	1						
1.1	1	1						
1.0	1	1						
.9	2	2						
.8	2	2						
.6	6	5		x				
.5	4	4						
.4	4	4						
.3	2	2						
.2	6	6						
0	5	5						
- .1	1	1						
- .2	2	2						
- .3	2	1		x				
- .4	3	3						
- .5	5	5						
- .6	1	1						
- .8	4	3		x				
-1.0	1	1						
-1.2	6	5	x					
-1.3	3	2	x					
-1.7	1	1						
-1.8	1	1						
-1.9	2	2						
-2.5	1	1						
Total	74	68	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 22

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "LINK TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	3	3						
1.5	4	4						
.7	24	22	xx					
- .2	20	19		x				
-1.0	18	16		xx				
-1.9	5	5						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 23

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Night Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	1	1						
1.5	1	1						
1.3	8	7	x					
1.1	1	1						
1.0	1	1						
.7	1	1						
.5	20	18	x	x				
.4	1	1						
.2	4	4						
0	3	2		x				
- .1	3	3						
- .3	5	5						
- .4	3	3						
- .6	3	3						
- .9	3	3						
-1.1	6	6						
-1.2	1	1						
-1.4	1	1						
-1.6	1	1						
-1.7	1	1						
-1.9	5	4		x				
-2.5	1	1						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

TABLE 24

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Applied Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3.4	1	1						
2.1	2	2						
1.6	1	0	x					
1.3	1	1						
1.2	3	3						
1.1	3	3						
.8	6	6						
.7	5	5						
.6	2	2						
.5	3	3						
.4	4	4						
.3	4	4						
.2	4	4						
0	4	3		x				
- .1	4	3		x				
- .2	1	1						
- .3	1	1						
- .4	2	2						
- .5	1	1						
- .6	3	3						
- .7	1	1						
- .8	1	1						
- .9	2	2						
-1.0	1	1						
-1.1	3	3						
-1.2	3	3						
-1.4	4	2	x	x				
-1.7	1	1						
-1.8	1	1						
-1.9	1	1						
-2.0	1	1						
Total	74	69	2	3	0	0	0	0
Elimin.	7	5		xx				
Retained	6	6						
(no flight records)								
Retained	1	1						

APPENDIX 8d

TABLE 25

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "FLYING TEST" DISTRIBUTION
Terrell, Texas

Standard Score	Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.8	1	1						
-1.7	1	1						
-1.6	1	0		x				
-1.5	2	1	x					
-1.4	2	1						x
-1.3	2	2						
-1.2	3	3						
-1.1	3	2		x				
- .9	2	2						
- .8	3	3						
- .7	2	1		x				
- .6	1	0	x					
- .5	3	2		x				
- .4	2	2						
- .3	3	2	x					
- .2	2	0	xx					
- .1	2	2						
0	2	0	xx					
.1	1	1						
.2	3	3						
.3	1	1						
.4	1	1						
.5	3	1	xx					
.6	2	2						
.7	5	5						
.9	1	0	x					
1.0	4	4						
1.1	1	1						
1.2	1	1						
1.3	2	1	x					
1.4	3	3						
1.5	1	1						
1.6	4	4						
1.7	1	1						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			
(no flight records)								

TABLE 26

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GROUND EXAM TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	Ground Exam Test	No Disability	Systolic 140 & over	Systolic 135 to 139	Systolic 100 & under	Systolic 101 to 105	Diastolic 90 & over	Diastolic 85 to 89
-1.6	2	2						
-1.5	3	2	x					
-1.4	2	1	x					
-1.3	3	2						x
-1.2	3	3						
-1.0	3	0	xxx					
- .9	2	1		x				
- .8	2	1		x				
- .7	4	4						
- .6	1	1						
- .5	1	1						
- .4	2	1	x					
- .3	1	1						
- .2	4	4						
- .1	1	1						
0	2	2						
.1	2	2						
.2	1	0	x					
.3	3	2	x					
.4	2	2						
.5	2	2						
.6	2	2						
.7	2	2						
.8	2	2						
.9	2	2						
1.0	2	2						
1.1	1	1						
1.2	3	1	x	x				
1.3	3	2	x					
1.4	1	1						
1.5	2	2						
1.6	2	1	x					
1.7	3	2		x				
Total	71	55	11	4	0	0	0	1
Elirin.	10	7	xx	x				
Retained (no flight records)	12	10	x		x			

TABLE 27

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "CHARACTER AND LEADERSHIP" DISTRIBUTION
Mesa, Arizona

Standard Score	Char. and Lead.	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
-1.7	1	1						
-1.6	1	1						
-1.5	2	0	xx					
-1.4	3	3						
-1.3	2	2						
-1.2	2	2						
-1.1	3	2		x				
-1.0	2	2						
- .9	2	1		x				
- .8	2	2						
- .7	2	1	x					
- .6	2	1		x				
- .5	1	1						
- .4	3	3						
- .3	1	1						
- .2	2	1	x					
- .1	3	1	xx					
0	1	1						
.1	2	1		x				
.2	3	2	x					
.3	2	1	x					
.4	2	1	x					
.5	2	2						
.6	3	3						
.7	2	2						
.8	2	1	x					
.9	3	3						
1.0	2	2						
1.1	2	2						
1.2	1	1						
1.3	2	1	x					
1.4	1	1						
1.5	1	1						
1.6	2	2						
1.7	2	2						
1.8	1	1						
1.9	1	0						x
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			

(no flight records)

TABLE 28

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "GENERAL TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	General Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
3.2	1	1						
1.9	2	1						x
1.6	1	1						
1.3	4	3		x				
.8	1	1						
.7	18	13	xxx	xx				
0	12	8	xxxx					
- .3	3	2	x					
- .6	18	15	xx	x				
- .9	2	1	x					
-1.3	4	4						
-1.9	4	4						
-2.5	1	1						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			

(no flight records)

TABLE 29

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "INSTRUMENT TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	Instrument Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.8	2	2						
1.4	4	2	x	x				
.9	5	4						x
.8	1	1						
.7	2	2						
.5	18	14	xx	xx				
.1	8	5	xxx					
- .3	18	14	xxx	x				
- .7	2	1	x					
-1.1	3	3						
-1.6	3	2	x					
-2.0	2	2						
-2.4	2	2						
-3.6	1	1						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			
(no flight records)								

TABLE 30

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "LINK TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	Link Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	2	2						
2.0	5	4						x
1.0	10	6	xxx	x				
.5	9	9						
0	9	5	xx	xx				
- .4	21	18	xxx					
- .9	10	6	xxx	x				
-1.4	2	2						
-1.9	3	3						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			
(no flight records)								

TABLE 31

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "NIGHT TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	Night Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
1.7	5	3	xx					
1.5	3	3						
1.3	1	0		x				
.9	1	1						
.7	19	14	xx	xx				x
.3	1	0	x					
- .2	28	22	xxxxx	x				
- .4	1	0	x					
-1.2	6	6						
-2.1	6	6						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			
(no flight records)								

TABLE 32

OCCURRENCE OF SYSTOLIC AND DIASTOLIC DISABILITIES
IN TERMS OF THE "APPLIED FLYING TEST" DISTRIBUTION
Mesa, Arizona

Standard Score	Applied Flying Test	No Disability	Systolic				Diastolic	
			140 & over	135 to 139	100 & under	101 to 105	90 & over	85 to 89
2.4	3	1	x	x				
1.5	4	3	x					
1.3	1	1						
1.1	2	1		x				
1.0	2	1		x				
.7	13	12	x					
.6	1	0		x				
.5	1	1						
.2	1	0	x					
.1	1	0	x					
- .2	17	15	x					x
- .4	1	0	x					
- .6	5	4	x					
-1.1	14	11	xxx					
-1.5	3	3						
-1.9	2	2						
Total	71	55	11	4	0	0	0	1
Elimin.	10	7	xx	x				
Retained	12	10	x		x			
(no flight records)								

APPENDIX 9

CRITERION STANDARD SCORE DIVISION USED IN COMPUTATION OF CHI-SQUARES

APPENDIX 9

CRITERION STANDARD SCORE DIVISION USED IN COMPUTATION OF CHI-SQUARENS

VISUAL DEFECT AND CARDIOVASCULAR (Elementary)

Test	Standard Score
Mesa, Arizona	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General	1.1 and above
Instrument	.6 to 1.0
Night	.1 to .5
Link	0 to -.4
Dual to 1st Solo (Day)	-.5 to -.9
Total Dual (Day)	-1.0 and below
Terrell, Texas	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General	1.1 and above
Instrument	.6 to 1.0
Night	.1 to .5
Dual to 1st Solo (Day)	0 to -.4
Total Dual (Day)	-.5 to -.9
	-1.0 and below
Link	1.1 and above
	.1 to 1.0
	0 to -.4
	-.5 to -.9
	-1.0 and below

VISUAL DEFECT AND CARDIOVASCULAR
(Elementary)

Test	Standard Score
Miami, Oklahoma	
Flying Test	-1.0 and below
	-.5 to -.9
Ground Exam	0 to -.4
	.1 to .5
Character and Leadership	.6 to 1.0
	1.1 and above
General	1.1 and above
	.6 to 1.0
Instrument	.1 to .5
	0 to -.4
Night	-.5 to -.9
	-1.0 and below
	1.1 and above
	.1 to 1.0
Link	0 to -.9
	-1.0 and below
	1.1 and above
	.6 to 1.0
	.1 to .5
Dual to 1st Solo (Day)	0 to -.4
	-.5 to -.9
Total Dual (Day)	-1.0 and below
	no score

VISUAL DEFECT
(Elementary)

Test	Standard Score
Clewiston, Florida	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General	1.1 and above
	.6 to 1.0
	.5 to -.9
	-1.0 and below
Instrument, Night	1.1 and above
	.1 to 1.0
	0 to -.9
	-1.0 and below
Link, Dual to 1st Solo (Day), Total Dual (Day)	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below

CARDIOVASCULAR
(Elementary)

Test	Standard Score
Cleviston, Florida	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General	1.1 and above
	.1 to 1.0
	0 to -.9
	-1.0 and below
Instrument	.6 and above
	.5 to -.4
	-.5 to -.9
	-1.0 and below
Night	.6 and above
	.1 to .5
	0 to -.9
	-1.0 and below
Link, Dual to 1st Solo (Day), Total Dual (Day)	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below

VISUAL DEFECT AND CARDIOVASCULAR
(Advanced)

Test	Standard Score
Mesa, Arizona	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General	1.1 and above
	.1 to 1.0
	0 to -.4
	-.5 to -.9
	-1.0 and below
Instrument, Link, Applied Flying	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below
Cardiovascular - Advanced	
Night	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 and below
Visual Defect - Advanced	
Night	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.9
	-1.0 and below

VISUAL DEFECT AND CARDIOVASCULAR
(Advanced)

Test	Standard Score
Terrell, Texas	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General, Instrument, Night, Applied Flying	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below
Link	1.1 and above
	.1 to 1.0
	0 to -.9
	-1.0 and below
Miami, Oklahoma	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General, Instrument, Night, Link, Applied Flying	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below

VISUAL DEFECT AND CARDIOVASCULAR
(Advanced)

Test	Standard Score
Clewiston, Florida	
Flying Test, Ground Exam, Character and Leadership	-1.0 and below
	-.5 to -.9
	0 to -.4
	.1 to .5
	.6 to 1.0
	1.1 and above
General, Instrument, Night, Link, Applied Flying	1.1 and above
	.6 to 1.0
	.1 to .5
	0 to -.4
	-.5 to -.9
	-1.0 and below

(Elementary)

All Schools*

Suitability:	
Bomber	3
Fighter	2
Instructor	1
	0
Suitability (Highest Rating)	3
	2
	1

*Scores on suitability were unavailable for elementary students at Miami, and for advanced students at all schools.

APPENDIX 10

DISTRIBUTION OF DEFECT CASES IN ORDER OF FLYING TEST RATING, LOW TO HIGH (Clewiston, Florida)

APPENDIX 10

TABLE 1

CASES WITH VISUAL DEFECT IN CLEWISTON, FLA. CLASSES IN ORDER OF FLYING TEST RATING LOW TO HIGH
(Measures below Army and Navy standards are underlined)*

Flying Test	Visual Acuity R.E.	Visual Acuity L.E.	Depth Perception	Heterophoria at 6 meters Eso	Heterophoria at 6 meters Exo	Heterophoria at 6 meters R.H.	Heterophoria at 6 meters L.H.	Prism Divergence	Angle of Convergence PcB.	Angle of Convergence Pd.	Accommodation Rt.	Accommodation Lt.
93	20/20	20/20	30	0	1	0	0	4	49	64	9.0	9.0
88	20/40-20/20	20/40-20/20	26	0	0	0	0	6	48	70	7.5	8.0
85	20/20	20/20	14	1	0	0	0	7	70	65	14.0	14.0
75	20/30-20/20	20/30/20/20	9	0	2	0	0	4	53	69	8.5	8.5
75	20/20	20/20	18	0	0	0	0	4	55	63	14.0	14.0
75	20/30-20/20	20/30-20/20	8	0	3	0	0	6	76	64	13.0	13.0
68	20/25-20/20	20/20	23	2	0	0	0	5	47	61	9.0	8.5
64	20/20	20/20	10	0	1	0	0	4	70	64	15.0	15.0
52	20/20	20/20	8	5	0	0	0	6	54	52	10.0	10.0
52	20/30-20/20	20/30-20/20	22	0	2	0	0	5	52	67	11.0	12.0
52	20/30	20/20	4	0	4	1	0	8	52	62	11.0	11.0
52	20/30-20/20	20/20	30	0	0	0	0	4	35	60	14.0	14.0
50	20/20	20/20 42 corr.	63	1	0	0	0	8	42	63	10.0	8.5
44	20/20	20/20	12	3	0	0	0	5	55	60	7.5	7.0
44	20/20	20/30-20/20	9	0	0	0	0	6	63	61	11.0	11.0
44	20/20	20/20	9	0	1	0	0	5	55	62	14.0	15.0
44	20/20	20/20	13	4	0	0	0	8	61	62	14.0	14.0
42	20/20	20/20	28	0	0	0	0	6	50	62	8.5	8.5
30	20/20	20/20	23	4	0	0	0	8	70	63	6.0	6.0
30	20/30	20/30	11	0	0	0	0	6	65	67	7.0	7.0
20	20/20	20/20	27	0	0	0	0	8	65	59	8.5	7.5
20	20/20	20/20	29	0	0	0	0	6	45	63	8.5	9.0
20	20/20	20/30	27	2	0	0	0	4	50	65	11.0	11.0
20	20/15	20/15	60	3	0	1	0	5	55	62	10.0	10.0
13	20/40-20/20	20/20	3	0	0	0	0	8	51	64	10.0	10.0
13	20/20	20/20	12	0	3	1	0	9	52	63	13.0	13.0
13	20/30	20/30	7	0	1	0	0	8	53	62	11.0	12.0
13	20/20	20/20	8	1	0	0	0	6	50	66	14.0	14.0
7	20/20	20/20	29	0	0	0	0	7	45	65	9.5	10.0
7	20/20	20/30-20/20	26	2	0	0	0	6	50	63	8.5	8.5
2	20/20	20/20	29	0	1	0	0	4	65	64	11.0	10.0
			Washouts									
	20/20	20/40-20/20	45	2	0	0	0	4	50	62	12.0	12.0
	20/15	20/15	30	1	0	0	0	4	50	60	12.0	12.0
	20/20	20/20	50	3	0	0	0	4	60	64	8.0	12.0
	20/20	20/20	2	0	3	0	0	8	52	55	11.0	11.0
	20/20	20/20	35	4	0	0	0	10	55	60	11.0	11.0
	20/20	20/20	3	6	0	0	0	8	50	63	9.0	7.5

*Cases underlined in black are below Navy standards
Cases underlined in red are below Army standards.

TABLE 1 (Continued)

CASES WITH VISUAL DEFECT IN CLEWISTON, FLA. CLASSES IN ORDER OF FLYING TEST RATING LOW TO HIGH

Flying Test	S.S.	Ground Exam	S.S.	Char. and Lead.	S.S.	General	S.S.	Instrument	S.S.	Night Test	S.S.	Link Test	S.S.
93	1.8	80	1.2	55	.4	330	-1.2	135	-1.3	54	-1.3	25	-1.9
88	1.6	61	.5	55	.4	330	-1.2	135	-1.3	54	-1.3	37	.3
85	1.5	44	- .2	9	-1.3	330	-1.2	142	-1.0	69	.5	30	-1.0
75	1.1	77	1.1	72	1.0	360	- .6	125	-1.8	69	.5	24	-2.1
75	1.1	68	.7	31	- .5	348	- .8	135	-1.3	58	- .9	36	.5
75	1.1	17	-1.2	86	1.6	348	- .8	142	-1.0	58	- .9	36	.1
68	.8	36	- .5	72	1.0	348	- .8	142	-1.0	69	.5	34	- .2
64	.7	59	.4	84	1.5	360	- .6	142	-1.0	58	- .9	36	.1
52	.2	62	.5	28	- .6	360	- .6	150	- .6	60	- .6	44	1.6
52	.2	52	.1	23	- .6	360	- .6	150	- .6	60	- .6	36	.1
52	.2	34	- .6	19	- .9	360	- .6	150	- .6	60	- .6	37	.3
52	.2	3	-1.6	12	-1.2	360	- .6	142	-1.0	58	- .9	46	2.0
50	.1	63	.5	31	- .5	330	-1.2	170	.4	78	1.5	38	.5
44	- .1	87	1.5	31	- .5	380	- .6	187	1.3	60	- .6	28	-1.3
44	- .1	70	.8	78	1.3	360	- .6	170	.4	78	1.5	32	- .6
44	- .1	28	- .8	55	.4	360	- .6	187	1.3	60	- .6	34	- .2
44	- .1	8	-1.6	3	-1.5	360	- .6	170	.4	69	.5	40	.9
42	- .2	82	1.3	28	- .6	360	- .6	187	1.3	69	.5	38	.5
30	- .6	93	1.7	55	.4	430	.8	170	.4	69	.5	27	-1.5
30	- .6	91	1.6	31	- .5	430	.8	170	.4	69	.5	30	-1.0
20	-1.0	86	1.4	76	1.3	430	.8	170	.4	69	.5	39	.7
20	-1.0	35	- .5	66	.8	430	.8	187	1.3	58	- .9	37	.3
20	-1.0	24	-1.0	1	-1.6	430	.8	170	.4	69	.5	38	.5
20	-1.0	2	-1.8	12	-1.2	430	.8	170	.4	69	.5	43	1.4
13	-1.3	55	.2	49	.2	470	1.5	187	1.3	78	1.5	39	.7
13	-1.3	49	0	31	- .5	470	1.5	187	1.3	78	1.5	35	0
13	-1.3	48	0	55	.4	470	1.5	187	1.3	78	1.5	36	.1
13	-1.3	5	-1.7	91	1.7	470	1.5	183	1.2	79	1.6	37	.3
7	-1.5	43	- .2	49	.2	470	1.5	200	1.9	69	.5	40	.9
7	-1.5	25	- .9	55	.4	470	1.5	200	1.9	78	1.5	33	- .4
2	-1.7	27	- .9	55	.4	510	2.3	212	2.5	85	2.4	41	1.1

TABLE 1 (Continued)

CASES WITH VISUAL DEFECT IN CLEWISTON, FLA. CLASSES IN ORDER OF FLYING TEST RATING LOW TO HIGH

Day						
Dual to 1st Solo	S.S.	Total Dual	S.S.	Suitability Bomber	Fighter	Instructor
8:22	-1.0	30:05	- .5	1	0	0
10:41	1.0	29:11	-1.0	2	0	0
9:43	.2	32:10	.6	1	0	0
9:41	.1	30:32	- .1	1	2	1
9:32	0	31:25	.2	2	1	1
8:27	- .9	30:44	- .2	1	1	1
10:09	.5	32:59	1.1	2	1	1
10:35	.9	31:13	.1	2	0	1
9:01	- .4	30:11	- .5	2	1	1
8:00	-1.3	20:10	-1.0	1	2	0
9:20	- .2	27:37	-1.9	2	1	0
8:23	-1.0	30:39	- .2	2	1	0
10:24	.7	32:47	1.0	1	1	0
11:17	1.5	32:54	1.1	1	1	0
9:57	.3	31:05	0	2	1	2
9:55	.3	33:54	1.6	2	1	2
9:43	.2	34:23	1.9	2	1	1
9:26	- .1	30:55	- .1	2	1	3
9:30	0	27:06	-2.2	1	1	0
9:57	.3	29:47	- .7	1	0	0
8:50	- .6	30:59	0	2	1	1
10:43	1.0	30:51	- .1	2	2	1
9:20	- .2	32:20	.7	1	1	2
9:50	.2	30:35	- .2	1	2	2
9:03	- .4	31:49	.4	1	2	2
9:00	- .4	29:37	- .8	2	1	1
9:29	0	29:51	- .7	2	1	0
9:17	- .2	34:31	2.0	1	2	1
11:00	1.2	35:08	2.3	1	1	0
9:17	- .2	30:38	- .2	2	1	1
8:29	- .9	29:10	-1.0	1	2	1

TABLE 2

CASES WITH CARDIOVASCULAR DEFECT IN CLENISTON CLASSES
IN ORDER OF ELEMENTARY FLYING TEST RATING LOW TO HIGH
(Advanced)

Flying Test	S.S.	Ground Exam	S.S.	Char. and Lead.	S.S.	General	S.S.	Instrument	S.S.	Night Test	S.S.	Link Test	S.S.	Applied Flying	S.S.
73	1.9	61	1.1	28	- .4	243	-2.3	137	-2.4	56	-2.8	25	-1.3	134	-1.1
40	.3	43	.2	72	1.7	262	-1.1	192	.6	69	- .4	27	-1.0	151	1.1
28	- .3	68	1.4	56	.9	289	.6	201	1.1	69	- .4	26	-1.2	128	-1.9
68	1.6	31	- .4	56	.9	266	- .9	175	- .3	67	- .8	26	-1.2	129	-1.7
59	1.2	22	- .8	42	.3	263	-1.1	189	.5	68	- .6	26	-1.2	134	-1.1
3	-1.5	11	-1.4	23	- .7	309	1.8	207	1.4	74	.5	40	.9	137	- .7
40	.3	35	- .2	33	- .2	283	.2	190	.5	65	-1.1	33	- .1	124	-2.4
59	1.2	67	1.4	18	- .9	265	- .9	168	- .7	68	- .6	36	.3	146	.4
28	- .3	29	- .5	10	-1.3	271	- .6	172	- .5	77	1.1	44	1.5	147	.5
						Eliminated									
25	- .4	26	- .6	18	- .9	290	.6	203	1.2	71	0	25	-1.3	135	-1.0
8	-1.2	2	-1.8	6	-1.5	296	1.0	182	.1	77	1.1	41	1.0	151	1.1
3	-1.5	4	-1.7	15	-1.1	300	1.3	187	.4	78	1.3	45	1.6	157	1.8
50	.8	73	1.7	56	.9	274	- .4	177	- .2	70	- .2	27	-1.0	144	.2

TABLE 2 (Continued)

CASES WITH CARDIOVASCULAR DEFECT IN MIAMI CLASSES IN ORDER OF ELEMENTARY FLYING TEST RATING LOW TO HIGH
(Advanced)

Flying Test	S.S.	Ground Exam	S.S.	Char. and Lead.	S.S.	General	S.S.	Instrument	S.S.	Night Test	S.S.	Link Test	S.S.	Applied Flying	S.S.
35	- .4	64	.7	41	0	256	-1.1	194	1.2	80	1.1	33	- .2	134	.6
						Eliminated									
33	- .5	15	-1.2	41	0	278	0	195	1.2	80	1.1	33	- .2	114	-1.0
70	1.0	75	1.2	41	0	298	.9	132	-2.6	70	0	30	- .9	123	- .3
7	-1.5	16	-1.2	29	- .5	307	1.3	203	1.7	69	- .1	38	.9	124	- .2
22	- .9	2	-1.7	9	-1.3	289	.5	178	.2	75	.5	35	.2	137	.8
87	1.7	30	- .6	23	- .8	255	-1.1	120	-3.3	60	-1.1	35	.2	115	- .9
53	.3	45	0	5	-1.5	264	- .7	153	-1.3	92	2.4	35	.2	136	.7
61	.6	38	- .3	66	1.0	273	- .3	170	- .3	67	- .4	35	.2	128	.2
45	0	3	-1.7	5	-1.5	279	0	161	- .8	75	.5	43	2.1	131	.3
68	.9	78	1.3	23	- .8	278	0	171	- .2	64	- .7	32	- .5	113	-1.1
61	.6	34	- .5	41	0	273	- .3	180	.3	66	- .5	34	0	121	- .4
35	- .4	62	.7	54	.5	299	.9	171	- .2	74	.4	35	.2	118	- .7
1	-1.8	1	-1.8	15	-1.1	320	1.9	185	.6	85	1.6	47	3.0	149	1.7
43	- .1	82	1.4	23	- .8	294	.7	195	1.2	65	- .6	28	-1.4	108	-1.5

TABLE 2 (Continued)

CASES WITH CARDIOVASCULAR DEFECT IN TERRELL CASES IN ORDER OF ELEMENTARY FLYING TEST RATING LOW TO HIGH
(Advanced)

Flying Test	S.S.	Ground Exam	S.S.	Char. and Lead.	S.S.	General	S.S.	Instrument	S.S.	Night Test	S.S.	Link Test	S.S.	Applied Flying	S.S.
						Eliminated									
						Eliminated									
55	.5	21	- .9	77	1.5	307	.1	175	-1.2	80	.5	37	.7	137	-1.4
62	.8	79	1.6	12	-1.2	270	-1.3	198	.6	77	0	36	- .2	150	- .1
46	.1	46	.2	19	- .9	300	- .2	186	- .3	80	.5	35	-1.0	151	0
52	.4	59	.7	70	1.3	324	.7	180	- .8	65	-1.9	35	-1.0	137	-1.4
50	.3	62	.8	17	-1.0	286	- .7	173	-1.3	85	1.3	37	.7	167	1.6

TABLE 2 (Continued)

CASES WITH CARDIOVASCULAR DEFECT IN MESA CLASSES IN ORDER OF ELEMENTARY FLYING TEST RATING LOW TO HIGH
(Advanced)

Flying Test	S.S.	Ground Exam	S.S.	Char. and Lead.	S.S.	General	S.S.	Instrument	S.S.	Night Test	S.S.	Link Test	S.S.	Applied Flying	S.S
38	- .2	49	.3	43	.2	260	.7	160	.5	60	- .2	38	1.0	110	-1.
7	-1.5	16	-1.0	5	-1.5	260	.7	170	1.4	70	1.7	35	- .4	140	1.
42	0	80	1.6	38	- .1	250	0	150	- .3	65	.7	35	- .4	123	
62	.9	17	-1.	23	- .7	240	- .6	150	- .3	60	- .2	36	0	118	-
53	.5	69	.2	48	.4	245	- .3	150	- .3	60	- .2	34	- .9	120	-
29	- .5	20	- .9	19	- .9	240	- .6	150	- .3	60	- .2	38	1.0	150	2.
28	- .6	17	-1.0	46	.3	250	0	145	- .7	60	- .2	34	- .9	150	
						Eliminated									
4	- .3	45	.2	58	.8	260	.7	155	.1	70	1.7	36	0	110	-1.1
52	.5	4	-1.5	37	- .1	250	0	155	.1	60	- .2	38	1.0	110	-1.
9	-1.4	1	-1.3	83	1.9	280	1.9	165	.9	65	.7	40	2.0	120	- .2
38	- .2	8	-1.4	69	1.3	250	0	155	.1	63	.3	35	- .4	125	
42	0	32	- .4	35	- .2	240	- .6	160	.5	65	.7	38	1.0	130	
72	1.3	72	1.3	4	-1.5	236	- .9	135	-1.6	59	- .4	34	- .9	115	-
16	-1.1	22	- .8	41	.1	260	.7	160	.5	65	.7	36	0	134	1.0
						Eliminated									
						Eliminated									
4	-1.6	70	1.2	13	-1.1	270	1.3	170	1.4	68	1.3	36	0	135	
26	- .7	81	1.7	26	- .6	260	.7	160	.5	65	.7	34	- .9	129	