

THE I. Q. AS AN INDEX OF SUCCESS  
IN THE JEROME JUNIOR-SENIOR HIGH SCHOOL

by

Fred D. McDonald

---

Submitted in partial fulfillment of the  
requirements for the degree of



Master of Arts

in the College of Education of the  
University of Arizona

1 9 3 1

---

Approved:  
W. Garrison  
July 23, 1931



E 9791  
1931  
20  
cop. 2

- I. Introduction
  - a. Statement of Problems
- II. History of Students
  - a. Nationalities
  - b. Labor Conditions
  - c. Environment
  - d. Future Careers
- III. Source of Material
  - a. Testing Program
  - b. Semester Standing in all Academic Subjects
  - c. Limitation of Material
- IV. Procedure
  - a. Tabulation of Results of the I. Q. and  
Subject Marks
  - b. Relation of I. Q. to Participation in  
Extra-Curricula Activities
- V. Conclusions
- VI. Bibliography
- VII. Appendix

82731

THE I. Q. AS AN INDEX OF SUCCESS  
IN THE JEROME JUNIOR-SENIOR HIGH SCHOOL

Introduction

The value of the I. Q. in its relationship to the achievement of the student has long been a problem before the educators of this country. In the school covered by this study, the great number of nationalities represented brought this problem to the mind of the writer. Two problems of importance will be discussed in this paper; first, "Does the I. Q. of the student indicate his future success in his academic studies?" and second, "Is leadership based upon the I. Q.?" The first problem will be treated for the student body as a whole and also by nationalities by means of comparison between the American or English speaking student with those of foreign descent. The second problem will be treated by taking the leaders in all athletics, debate, music, class officers, student representatives, etc., and making a comparison of those participating in the physical activities with those participating in the mental activities to determine to what extent the I. Q. is related to leadership and in which activity it is the greater factor.

## History of Students

In the background of all research studies there must be some conditions or factors, which in a large degree, control the findings of that study. In the present study there are at least four factors which affect directly the habits, state of mind, and ambitions of the students studied. In the first place, the large number of nationalities represented in such a small group should lend considerable to the general intelligence of each individual if his social life were cosmopolitan. The contrary is true. These different nationalities mingle very little, each group seeking and carrying out its own social activities, celebrating the national holidays of its fatherland, and they are divided in their opinion as to the celebration of our state and national holidays. For the convenience of this study, the student body has been divided into five groups; the Americans, Spanish, Mexican, and Austrian races have been placed in individual groups and the fifth group is made up of a number of each of the following nationalities, Italian, Croatian, Hungarian, Jewish, Serbian and Slavic. There are, of course, in a group like this, many of mixed parentage but these have been classified with the nationality of the father for it is through the father that the social and economic contacts are made.

Jerome is a mining camp and the workers in the majority of the homes represented work in some capacity for one of the three mines. Very few, if any, of the major positions are held by other than American men. No women or girls are employed in any capacity by any of the mines. Many of the business houses, especially recreation halls and small grocery stores, are operated by other nationalities, but aside from these, the majority of the foreign speaking people do the heavy or manual type of labor. Their home life and existence depends to a large extent on the labor conditions which, in a mining camp, fluctuate with the market using the product of the mines. In the present depression, for example, only the married men with families, who have had the longest employment by the company, are given work and in many cases these are employed only for part time. The older boys are thrown out of work and in many cases have returned to school to start where they left off when employed.

Because of the instability of their positions and incomes, these workers have unstable homes. A dwelling of two or three stories, of two or three rooms to the home, will house from four to six families. The furnishings of the homes are only the necessities since this type of family, when times are good, spends freely for food and fineries which do not last. The present is generally the only time for

which they live. The location of the town on a hillside prevents the development of yards with flower or vegetable gardens and many other things that go to make up a home. The streets, although narrow, are the principal playgrounds for the children. One small park is provided for the children as a playground, but it is not used extensively. Two swimming pools, one for the American group and one for the foreign group, are provided in separate parts of the town. Many families of different nationalities are grouped in the same neighborhood with no common means of communication of speech, ideals or activities. The American population, to a large extent, is segregated into districts of its own, in better homes, in some cases with play yards, and social activities in common.

In these environments, the child must base his career upon chance opportunities or else follow in the footsteps of his parents. Economic conditions force the older boys and girls, at an early age, to help support, not only themselves but to a large degree, the large families which are common with this type of laboring population. The holding power of the schools, even with the enrichment of the curriculum with vocational classes, home economic work, etc., cannot compete with these conditions. The girls, without proper training, secure and try to earn a living by doing household work for better financially fixed families and the

boys do delivery work, bring in wood from the nearby mountain forests and do odd job work. Work in the mines is practically closed to all boys under school age as the mine authorities try to follow out the theory that an education and corresponding maturity are better background for apprenticeship than extreme youthfulness.

The above factors, combined with a language handicap, influence directly this study but will not be treated as a part of the study. Most of the children from the foreign groups enter school without a speaking knowledge of the English language and are segregated into classes where this is their entire instruction. This naturally delays their academic work by one or two years and unless they master the language in the early grades, it is a handicap throughout their school life. Ashitt (1) in "What the Army Tests Measured"

says, "No study of racial differences which fails to take into consideration the social status of the group tested can be considered valid".

This is undoubtedly the truth but as this study has to do only with the relationship of the I. Q. and the future academic success of the children, these factors are mentioned for the purpose of showing that the author is aware that they do affect the findings of such a study.

---

(1) Ashitt, Opportunity, July 1924, "What the Army Tests Measured"



### Source of Material

The data used in this study are obtained from the permanent records of each student. When a child enters the seventh grade, (the first year of our six-year high school), he is given the Terman group Intelligence Test. The individual testing program of the school system culminates in the sixth grade, making it impossible to use any other data except the group I. Q. as a basis of comparison. The grades used are for the first semester only. This is necessary because of the fact that the seventh grade students have been in school only one semester. The material is of course limited, but it has been the opinion of the writer that the I. Q. secured from a group test is not a fair yardstick to measure the abilities of the child, especially children who have a language handicap. Bere (1) claims to have demonstrated that Jews are superior to Italians in mental capacity as measured by the Stanford-Binet and National Intelligence tests and that the difference is not essentially one of language handicap. She advanced the interpretation that the difference is due to the nature rather than to the amount of abilities.

---

(1) "A comparative study of the Mental capacity of children of foreign parentage". Mary Bere, Columbia Contribution to Education, 1924, No. 154.

Seago and Koldin (1) are not so determined but come to two conclusions. "1--The fact has been established that difference in mental capacity exists between groups of children of different parentage, in particular between Jewish and Italian children. 2--It has not been equally well established whether this difference is one of language handicap, of general mental ability or of specialization of abilities."

---

(1) "A comparative study of the Mental capacity of sixth grade Jewish and Italian children". Seago and Koldin, School and Society, 22: 564-68. Oct. 31, 1925.

### Procedure

In Table I will be found the arithmetical averages of the I. Q.'s and semester grades in all subjects of the students grouped according to nationality. The school uses the five-point grading system. It will be noted that while the American group has the highest average I. Q., it has the highest grade average in only three subjects; history, cooking and shorthand. The Mexican group, ranking the lowest in average I. Q., leads in grade averages in two subjects; Spanish and bookkeeping. The Austrian group, ranking in the middle for I. Q. average, has the highest grade average in nine subjects and is tied for the tenth; English, algebra, geometry, biology, general science, geography, civics, manual training, shop and tied in physical education. The Mixed group ranking second in average I. Q. leads in three subject averages; chemistry, arithmetic, and sewing, while it ties with the Austrian group in physical education. The Spanish group, ranking fourth in I. Q. average leads in only one subject, that of typewriting, in grade averages.

Table I

Arithmetical Averages of the I. Q.'s  
and Semester Grades in all Subjects

	I. Q.	Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science
Americans:	104.2	2.01	2.99	2.67	3.06	2.72	3.51	3.33	2.60	2.97
No. Cases	117	117	109	69	27	13	37	12	12	12
Mexican	88.8	2.21	3.29	3.04	4.12	3.37	2.18	3.67	3.19	3.43
No. Cases	106	106	104	67	10	11	29	4	11	8
Spanish	89.7	1.95	3.35	3.20	3.25	3.00	2.37	0	3.33	5.00
No. Cases	26	26	26	15	3	2	8		6	1
Austrians	97.7	1.88	2.71	2.83	1.00	2.33	2.73	2.50	2.50	2.00
No. Cases	24	24	24	13	1	4	11	2	3	1
Others	97.8	2.88	2.93	2.75	2.33	3.25	3.42	2.00	2.89	2.67
No. Cases	26	26	26	14	4	5	9	2	5	6

	Typewriting	Shorthand	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop	Bookkeeping
Americans:	3.42	2.87	2.30	2.65	2.27	2.28	2.77	1.65	2.78	3.25
No. Cases	23	9	23	58	19	15	31	16	9	5
Mexican	3.50	3.00	2.67	3.44	2.64	3.00	2.84	2.67	2.79	2.00
No. Cases	20	4	37	64	20	16	31	9	16	1
Spanish	2.88	3.00	2.37	3.06	3.29	3.34	3.00	2.00	3.00	3.00
No. Cases	6	3	5	15	7	3	9	1	3	1
Austrians	2.95	0	2.00	2.93	1.66	2.34	2.30	3.00	2.50	3.00
No. Cases	7		8	12	5	6	6	4	2	1
Others	3.00	0	2.75	2.54	3.00	2.60	2.40	1.50	3.00	0
No. Cases	6		5	13	2	5	6	2	2	

Table II shows the Coefficient of Correlation, and other data, between the I. Q. and grades of all students in all subjects except bookkeeping, in which the number of students did not warrant a correlation. All subjects, except shop, show a positive correlation. Marked correlations are shown in chemistry, general science, shorthand, civics, and algebra. Significant correlations show up in English, history, geography, and arithmetic. One-half of all subjects show positive and significant correlation.

Table II  
Coefficient of Correlation  
between the I. Q. and Grades of all Students

	Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science
R'	.047	.42	.42	.42	.33	.19	.53	.32	.63
P.E.	.038	.032	.041	.082	.101	.066	.108	.099	.076
Ave. I.Q.	96	96	96	99	99	97	107	94	96
Ave. Grade	2	3	2.8	3.1	2.9	2.9	3.2	3	3.2
No. Cases	299	289	178	45	35	95	20	37	28

  

	Typewriting	Shorthand	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
R'	.013	.57	.28	.38	.51	.31	.088	.299	-.002
P.E.	.087	.114	.068	.045	.068	.089	.060	.103	.119
Ave. I.Q.	95	96	95	96	93	96	93	97	90
Ave. Grade	3.4	3	2.5	3	2.5	2.7	2.6	2.2	2.9
No. Cases	60	16	82	162	53	46	85	35	32

Using the same data, worked out for each nationality group in each subject having enough cases to warrant, Table III shows that the American group has significant and positive correlation in the following subjects: Average of all grades, English, history, Spanish, arithmetic, chemistry, general science, and geography. All the remaining subjects, except physical education and typewriting, show positive, but low correlations. The Mexican group shows marked correlation in only one subject, that of Civics. The remaining subjects, except physical education, geometry, general science, typewriting, cooking, and sewing, and geography show positive correlations. The Spanish group shows no significant correlation in any subject but all except physical education, history, and arithmetic are positive. The Austrian group shows significant correlations in arithmetic and typewriting. Of the remaining subjects, all are positive with the exception of physical education, cooking and sewing, manual training and shop. The Mixed group shows positive significant correlations with the average of all grades, English and geography, and a negative correlation in typewriting. The remaining subjects, with the exception of geometry, are positive but not significant.

Table III

Coefficient of Correlation between the I. Q.

and Grades of all Students grouped according to Nationalities

American Group								
	Ave. of All Grades	Physical Education	English	History	Spanish	Arithmetic	Algebra	Geometry
r'	.47	-.018	.35	.404	.49	.44	.225	.245
P.E.	.048	.061	.055	.067	.080	.071	.121	.176
Ave. I. Q.	105	106	104	108	101	108	101	105
Ave. Grade	2.6	2	2.9	2.6	3.4	2.7	3	2.9
No. cases	117	117	109	69	37	58	27	13

  

	Chemistry	Biology	General Science	Typewriting	Shorthand	Civics	Cooking and Sewing	Manual Training & Shop	Geography
r'	.545	.443	.64	-.016	.325	.279	.112	.120	.558
P.E.	.137	.156	.116	.140	.196	.142	.117	.103	.094
Ave. I. Q.	106	98	101	98	101	100	107	102	109
Ave. Grade	3	2.6	3	3.4	3	2.2	2	2.6	2.2
No. Cases	12	12	12	23	9	19	31	40	23

  

Mexican Group								
	Average of All Grades	Physical Education	English	History	Spanish	Arithmetic	Algebra	Geometry
r'	.32	-.036	.32	.317	.207	.24	.315	-.081
P.E.	.058	.065	.059	.074	.120	.079	.192	.202
Ave. I. Q.	89	89	89	87	93	86	90	90
Ave. Grade	2.9	2.2	3.4	3	2.2	2.4	3.5	3
No. Cases	106	106	104	67	29	64	10	11

Table III. (Continued)

Mexican Group (continued)							
	Biology	General Science	Typewriting	Civics	Cooking and Sewing	Manual Training & Shop	Geography
r'	.010	-.081	-.015	.61	-.029	.056	-.066
P.E.	.261	.237	.15	.094	.134	.099	.111
Ave. I. Q.	93	93	96	89	87	89	85
Ave. Grade	3.6	3.7	3.6	2.5	3	2.5	2.7
No. Cases	11	8	20	20	25	47	37

Spanish Group						
	Average of All Grades	Physical Education	English	History	Spanish	Arithmetic
r'	.21	-.157	.011	-.22	.31	-.33
P.E.	.126	.133	.132	.165	.215	.155
Ave. I. Q.	90	90	90	87	94	88
Ave. Grade	2.8	2	3.2	3.1	3.1	3
No. Cases	26	26	26	15	8	15

	Biology	Typewriting	Civics	Manual Training & Shop	Geography
r'	.301	.134	.022	.19	.189
P.E.	.25	.27	.254	.188	.290
Ave. I. Q.	84	91	90	91	88
Ave. Grade	3.3	2.8	3.3	2.7	2.6
No. Cases	6	6	7	12	5



Table III. (Continued)

Austrian Group							
	Average of All Grades	Physical Education	English	History	Spanish	Arithmetic	
r'	.46	-.16	.25	.309	.134	.48	
P.E.	.122	.134	.13	.169	.199	.15	
Ave. I. Q.	98	98	98	98	98	95	
Ave. Grade	2.4	1.8	2.7	2.8	2.7	2.9	
No. Cases	24	24	24	13	11	12	
	Typewriting	Civics	Cooking and Sewing	Manual Training & Shop	Geography		
r'	.53	.44	-.39	-.038	.136		
P.E.	.183	.247	.18	.238	.234		
Ave. I. Q.	96	92	96	101	96		
Ave. Grade	3.1	2.4	2.4	2.3	1.7		
No. Cases	7	5	10	8	8		
Other Group							
	Average of all Grades	Physical Education	English	History	Spanish	Arithmetic	
r'	.63	.176	.48	.51	.45	.47	
P.E.	.079	.129	.101	.133	.179	.145	
Ave. I. Q.	98	98	98	102	97	100	
Ave. Grade	2.6	4.1	2.8	2.7	3.2	2.5	
No. Cases	26	26	26	14	9	13	
	Geometry	Biology	General Science	Typewriting	Cooking and Sewing	Manual Training & Shop	Geography
r'	-.046	.417	.59	-.65	.32	.41	.706
P. E.	.29	.296	.179	.159	.228	.198	.151
Ave. I. Q.	96	93	98	83	96	101	109
Ave. Grade	3.4	2.8	2.6	3.6	2.3	2.6	2.2
No. Cases	5	5	6	6	7	8	5

In Table IV is shown the Median I. Q. of the different nationality groups with the variability percentages of each group to the other groups.

Table IV

The Median I. Q. of the Different Nationality Groups with the Variability Percentages of each group to the other groups.

	: Variability (%)						
Average	Average Deviation	Standard Deviation	Median	American	Mexican	Spanish	Austrian
American	104.52	12.59	16.05	101.93			
Mexican	89.44	9.06	13.59	87.57	98.9		
Spanish	90.23	8.72	10.45	90.00	75.4	76.2	
Austrian	98.08	10.69	13.98	97.66	92.9	106.0	81.2
Others	95.22	11.51	13.38	96.00	91.5	108.0	82.4 98.2

The Mexican group is 98.9% as variable as the Americans; the Spanish group, 75.4%, the Austrian, 92.9%, and the Mixed group, 91.5%. The Spanish group is 76.2% as variable as the Mexican group; the Austrians, 106%, the Mixed group, 108%. The Austrian and Mixed groups are, respectively, 81.2% and 82.4% as variable as the Spanish, and the Mixed group is 98.2% as variable as the Austrians.

In working out the Mean Square Contingency for the I. Q. of all students, we find, according to Table V, a value for C of .403, and for the grades of all students, we find a value for C of .144.

In the case of the I. Q., this indicates a medium positive correlation between nationality and I. Q.'s but a low positive correlation between nationality and grades.

In Table V-a, the total includes all school marks for each student, ranging from 3 to 6 marks for each student, while Table V-b total shows only one I. Q. for each student.

Table V

Mean Square Contingency for the I.Q. and Grades of all Students

Table V-a (School Marks)						
	1	2	3	4	5	Total
Americans	(76.7) 83	(187.2) 214	(207.8) 199	(114) 92	(31.6) 31	619
Mexicans	(70.8) 56	(172.4) 143	(192) 201	(105.4) 135	(29.2) 35	570
Spanish	(17) 12	(42.3) 44	(47) 45	(25.8) 33	(7) 6	140
Austrian	(16.4) 29	(40.2) 40	(44.6) 42	(24.5) 19	(6.7) 3	133
Others	(17) 19	(41.87) 43	(46) 52	(25) 17	(7) 7	138
<b>Total</b>	<b>199</b>	<b>484</b>	<b>539</b>	<b>296</b>	<b>82</b>	<b>1600</b>

C=.144

Table V-b (Group I. Q.)						
	65-82	83-101	102-119	120-137	138-155	Total
Americans	(21.9) 9	(58.3) 50	(28.5) 39	(6.6) 15	(1.5) 4	117
Mexicans	(19.9) 33	(52.8) 58	(24.4) 14	(6) 1		106
Spanish	(4.8) 7	(12.9) 15	(6.3) 4	(0)		26
Austrian	(4.4) 2	(11.9) 14	(5.8) 7	(1.3) 1		24
Others	(4.9) 5	(12.9) 12	(6.3) 9	(0)		26
<b>Total</b>	<b>56</b>	<b>149</b>	<b>73</b>	<b>17</b>	<b>4</b>	<b>299</b>

C=.403

In Table VI is presented data concerning the students participating in the Mental and Physical extra-curricula activities.

Table VI

Data concerning the students participating in the Mental and Physical Extra-Curricula Activities

	Ave. Dev.	Stand. Dev.	Median	v	r'	P.E.	Ave. I.Q.	Ave. Grade	No. of Cases
Mental	11.10	13.32	96.66	.999	.51	.059	99	2.7	70
Physical	9.70	12.59	93.22		.49	.066	93	2.7	60

In the Physical groups, 35.45% reach or exceed the Median of the Mental group in respect to their I. Q. In both the Mental and Physical groups there is a marked correlation between the I. Q. and the academic grades made by the members of each group. The average grade of the Physical group is slightly better than that of the Mental group based on the average I. Q. The average grade for both groups is 2.7 while the average I. Q. for the Mental group is 99 against 93 for the Physical group. It will also be noted that the Physical group is .999% as variable as the Mental group.

### Conclusions

From the data considered, the following conclusions may be drawn concerning the Jerome Junior-Senior High School:

1. That, in the student body as a whole, there is a positive correlation between the group I. Q. and scholastic marks in all subjects, except shop, and that the following subjects show significant correlations; chemistry, general science, shorthand, civics, algebra, English, history, geography, and arithmetic; that these subjects make up 50% of the number considered.
2. That, in the nationality groups, with the exception of the Spanish group, the variability is almost in direct proportion to the Median I. Q.'s of the group.
3. That, the results of Table V indicate that the test measures correlation between the I. Q. and nationalities.
4. That, from the results of the study it seems there is only a slight relationship between the I. Q. and leadership.
5. That, the leaders of the Mental extra-curricular activities have a slightly higher Median I. Q. and a slightly higher correlation between I. Q. and subject marks than do those of the Physical extra-curricular activities.

BIBLIOGRAPHY

- Bere, Mary: "A Comparative Study of the Mental Capacity  
of Children of Foreign Parentage"  
Columbia Contribution to Education, 1924, No. 154.
- Seago and Koldin: "A Comparative Study of the Mental Capacity  
of Sixth Grade Jewish and Italian Children"  
School and Society, 22: 564-68, Oct. 31, 1925.
- Ashitt: "What the Army Tests Measured"  
Opportunity, July, 1924.



± APPENDIX ±

MEXICAN	I. Q.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop	
	Boys	Girls																				
1		79	2	3	3																	
2		82	2	3	4										3	4					3	
3	120		3	2	1										3	1					3	
4	83		2	3	3										3	3	1		4			
5	108		2	3	3			1				3						3	5			
6	101		1	2	2			2	5													
7	117		1	2	2			2							2	1				2		
8	92		1	3				1		3												2
9	73		1	4			2	1														2
10	71		1	4	3															2		
11	73		2	4	3															4		
12	80		2	3	2										3	3						
13		87	2	4	3												3	3				
14		82	2	4		4							3								4	
15		86	2	4	5	5		3		5												
16	78		3	4	4										4	4			1			
17	89		1	5			2	2							4							
18	88		2	1	2										1	4						
19	97		2	3		1		2														
20	82		3	3				2			3	3				5						
21	87		2	4		4		2														3
22	109		2	4	3										4	4				3		
23		97	1	3				1				3							3			
24	100		2	2	1											1				3		
25	94		4	4		2					3											4
26		85	2	4				2		3		4										
27		92	3	5	5																	
28		89	3	4						5						3		4				
29		87	3	5	5										4	5		3			4	
30	83		3	3	3																	2
31	84		3	3	3															4		
32	66		1	4	4											3	3					
33		98	3	2				1					3					2				
34	109		2	2				1		4			1									
35	70		1	4	1										1	3				2		
36		83	2	3	4										1	4		3				
37	82		3	3	3											3				2		
38	110		1					4				3					3			2		3
39	105		3	4	1										2	4				2		
40		87	2	3	3										2	3						





AUSTRIAN	I.O.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
	BOYS	GIRLS																			
1	76		3	4	4											4	3				
2		97	2	3	3										3	3		3			
3	70		1	3	2										2	3			3		
4		110	2	4	4										3	4					4
5		100	2	3				2		3		3									
6	126		3	1			2	3			2										
7	114		2	3	2										1	2			2		
8		99	2	3	2										1	4		2			
9	110		5	3			2	4											2		3
10	118		1	2	3											1	1		3		
11	118		1	3	1	1			2										3		
12		95	1	2				2				2							2		2
13	86		1	5				2											2		2
14		94	3	3					3	3									1		2
15		100	2	4			3	4				5					4		1		3
16		84	1	2	3										2	4			3		
17		84	1	2				3						3							
18	83		2	4				4						3							
19		87	2	3	4												3				
20		86	2	1				3								4	1	2			
21	98		1	3	4										2	3				2	
22		98	3	2	3					1											
23	114		1	1			1	1				1									
24	104		1	1	2										1	1				1	

SPANISH	I. O.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
	BOYS	GIRLS																			
1	91		1	4	3										2	3			5		
2		95	2	4	4											4	4	4			
3		90	2	3				3				4				2					
4	92		2	3		3		2													3
5	102		2	4	4										3	3			2		
6	93		2	3	2										2	4					
7	83		1	5	3					4											3
8		92	1	4		3		3				3									
9	103		2	3			3	1				3									
10		100	2	2																	
11		98	1	3				2		4		2	1	3			2				
12	79		3	5			3			3											3
13	77		2	4	3										4	4			2		
14	79		3	3	4											4	3		4		
15	100		4	4		4		4											3		
16	111		3	4	3														2		
17		81	1	4				3		5			5			4	4		2		
18		75	1	2							5	3				2					
19		87	3	3	4											3		3			
20	108		2	4	2											1			2		
21		76	2	3	2										2	3				2	
22		73	2	4	4											3				2	
23	85		2	3	3											4	3				
24		97	2	2	3			1		2						3			3		
25	88		2	3						2		2									
26	86		3	1	3					2						2	3				

MIXED GROUP	I. Q.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
	BOYS	GIRLS																			
1		80	3	3	4											3		4			
2	86		3	4			3			3											3
3		107	2	2	3										3	3		2			
4	101		1	3	3										3	2			2		
5	97		1	3	3		5			2						2					
6	116		2	2	2										2	2			1		
7	88		3	4	3		3		2						2	2					
8	100		2	5		2		4			4										
9		95	2	2	2											2		2			
10		117	2	1	3										2	3		2			2
11		79	1	3											2	3		3	3		1
12	94		2	4	4										3	3					
13		95	1	3		3		3			3	5				3				3	
14	119		2	1	1											2				3	
15	100		1	3			3	3		2	1										
16	95		4	4				5		4											3
17		85	2	3				4		3			4								
18	78		1	4							4	2				3					
19		102	2	2		3					2		2								
20		93	2	3	3			3	5												
21		110	2	5			3	3				3									
22		112	1	1		2		3			2	5									
23		119	1	2	3			1										2			
24	114		2	1	1										1	2		2		3	
25		80	2	4				3				3				2					
26	82		2	3	3											4	3		3		

AMERICANS	I. O.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
	BOYS	GIRLS																			
1	91		4	4	3										4	3			3		
2		107	3	4	2							3					2				
3		107	2										3				1				
4		109	2	3	3											3		3			
5	107		3	3	2	4			2												
6	91		2	4	3											3			3		
7		98	1	2	2											1		2			
8	117		2	3	3											3				5	
9	137		3	1			3	3			1										
10		106	2	3		2		4				3									2
11		105	2	2	3										2	3					2
12	86		1	4		3		5		5											3
13	107		1	4		1					4	5									2
14		98	3				3						3				2				
15	109		2	4	3										3	4			1		
16		109	2	3				4					4			2					
17		83	2	3	3										2	3					1
18	88		2	5	5	3		4													
19		109	2	3	2		2	4				3									
20		118	2	2			3	2					2								
21	95		1			3			2					3			4				
22		134	2	2	2										2	3					1
23		115	1	2	3											2		2			
24	100		2	2	3											3					
25	95		1	4	5			5	5							3			2		
26	98		2	3	3	3		3								3					
27	92		2	4																	
28		88	3	5		5		5			3	3				2					3
29		83	3	2	3							5									
30	96		2	4	3										4	4		2			
31		98	2	4	4										2	4			2		
32		99	2								2					3				3	
33	126		2	3	2												2				1
34	118		2	3	1										2	3			2		
35		99	1	5		4		4				4				1	1		3		
36	110		2				2		2					2							
37		97	1	3	2								3				1				1
38	104		2	4			3			3										4	
39	111		2	3	4											4				3	
40		110	2	2	3											2		2			
41	123		1	3	3											3				2	
42	96		1					3				3					1			1	
43		73	2	4	4										3	4		3			



AMERICANS	I. D.		Physical Education	English	History	Algebra	Geometry	Spanish	Chemistry	Biology	General Science	Typewriting	Shorthand	Bookkeeping	Geography	Arithmetic	Civics	Cooking	Manual Training	Sewing	Shop
	BOYS	GIRLS																			
44	108		2	3	2										4	4					
45		93	3	3			3	3		4											
46	100		3						5			5					2		4		5
47		97	2	2			4	3				3	3								
48	105		2	3				3		3									2		
49	95		2	4				5											3		3
50		93	3	3		4		5			3										
51		94	1						4				3				3				
52	71		1	4		4				4										3	
53	73		2	4	4											4				3	
54		92	2	2	2		4	2										3			
55	115		2	3		3		3		2									2		
56		118	2	2	1			2		2											
57	111		1	3	3										1	2			1		
58		100	2	2				2		1											
59	135		3	4	2											3			4		
60		79	3	3		1		4				4									
61	100		2	2	2																
62		72	1	4		3		4									1				
63		120	2	1	3										2	2			2		2
64		104	2	2			3	2				2									
65		130	2	3	3											3					
66		107	1	2	2	4			4									3			
67		134	2	2	2																
68		76	2	2				3		3		3				1		2			
69	111		3	4	4				4												
70		108	2	2	4										2	4			1		2
71	139		1	1	1										1	1			1		
72		102	1	4	3											3	1	3			
73		100	2	3								4		5		2					
74	111		1	2		2		2			1										
75		81	2	4	3											3	2	2			
76		100	2	3	3										3	3					2
77	100		2	3	2											3				3	
78	123		2	2	4											3					
79		103	2	4	4											3			4		
80	100		2	4	1											3				3	
81	94		2	2			2	3													2
82	110		2	3	3										3	3					
83		92	3	3	3				4							3			2		
84	132		2	2	2																
85	100		2	5			3	5		3						2			3		



Year	Month	Day	Hour	Temperature		Wind	Direction	Clouds	Humidity	Pressure	Rain	Snow	Ice	Fog	Thunder	Lightning	Hail	Other	
				Max	Min														
1912	Jan	1	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	2	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	3	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	4	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	5	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	6	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	7	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	8	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	9	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	10	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	11	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	12	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	13	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	14	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	15	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	16	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	17	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	18	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	19	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	20	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	21	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	22	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	23	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	24	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	25	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	26	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	27	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	28	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	29	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	30	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1912	Jan	31	11	14	8	1	W	1	100	30.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E9791  
1931  
20  
cop. 2

E9791. 1931 -20 C2



a39001 001277741b

E9791