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SOME DISCRIMINATIVE FACTORS IN PEER
ACCEPTANCE AMONG MALE JUVENILE
DELINQUENTS IN A TRAINING SCHOOL
SITUATION

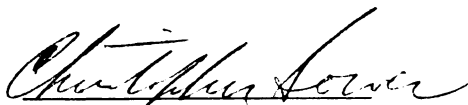
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**SOME DISCRIMINATIVE FACTORS IN PEER ACCEPTANCE
AMONG MALE JUVENILE DELINQUENTS IN A
TRAINING SCHOOL SITUATION**

by

Warren Garst Ballachey

A THESIS

**Submitted to the School of Graduate Studies of Michigan
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THESIS

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SOME DISCRIMINATIVE FACTORS IN PEER
ACCEPTANCE AMONG MALE JUVENILE DELIN-
QUENTS IN A TRAINING SCHOOL SITUATION

INTRODUCTION

A survey of the literature on juvenile delinquency reveals that a great many studies have been made for the purpose of differentiating between normal and delinquent populations. There have been relatively few investigations, however, which have attempted to identify those factors which differentiate one type of delinquent from another. (1) It is commonly recognized by all authorities in the field that delinquency is a legal term and does not represent either a sociological or a psychological entity. (2) Since delinquents have been classified on a legal basis the practice has been to segregate them from so-called normals without regard to the specific social behavior exhibited by the different individuals classified as delinquent. (3)

(4)

E. H. Sutherland says:

"Criminal behavior is a part of human behavior, has much in common with non-criminal behavior, and must be explained within the same general framework as any other human behavior."

Any intelligent attempt to provide individual treatment for juvenile delinquents, whether in an institutional setting or not, must be based on an adequate differential diagnosis. *Chen*

(1) Garrison, K. C., Psychology of Adolescence, Prentice-Hall and Co., New York, 1946. p.p. 201 f.f.

(2) Karpman, Ben, "Crime and Adolescence", Mental Hygiene, 1937, 21, p. 390.

(3) Wiers, Paul, Economic Factors in Michigan Delinquency, Columbia University Press, New York, 1944, p. 1.

(4) Sutherland, E. H., Principles of Criminology, J. B. Lippincott Co., New York, 1947, p. 3.

This thesis will be concerned with the study of one sociological characteristic of institutionalized male juvenile delinquents. This characteristic will be called peer-acceptance, by which is meant the extent to which an individual is chosen as being "liked-best" by his peers within the institution. The connotation of peer-acceptance in this study implies not leadership as outlined by Krech and Crutchfield,⁽¹⁾ but rather sociological acceptance or non-acceptance as it relates to the individual boy in the cottage setting. That this sort of differential diagnosis can be profitably applied within an institutional setting has been shown by the recent work of Kates and Harrington⁽²⁾ on aggression.

It is well known that many juvenile delinquents present varying behavior patterns which appear to be an effort to seek acceptance with their peers,⁽³⁾ and thus it is felt that the value of this study lies in the possibility of identifying both the accepted and non-accepted individual and considering this variable in the individualized treatment program, that is, encouraging the individual who is predicted to be non-accepted to engage in activities which may increase his acceptance before the pattern of non-acceptance can become established in the institutionalized setting. Normally in the training school situation it is the first time the adolescent has been divorced from his family, and this physical separation leads to a great deal of emotional insecurity, both personal and social, for the newly admitted boy. Social acceptance at Boys Vocational School is made, to a greater or lesser degree, within a trying social setting for the individual.

(1) Krech, David, and Crutchfield, Richard S., Theory and Problems of Social Psychology, McGraw-Hill Book Co., New York, 1948. p.p. 417 f.f.

(2) Kates, Solis L., and Harrington, Robert W., "Authority figure Perspective and Aggression in Delinquents", Journal of Genetic Psychology (in Press).

(3) Jennings, Helen, Leadership and Isolation, Longman Green and Co., 1944, p.p. 143-163.

SUBJECTS

The subjects involved in this study are male juvenile delinquents ranging in age from twelve to seventeen years. For the purpose of this study, an individual is delinquent if he has been committed to Boys Vocational School,⁽¹⁾ Lansing, Michigan. Approximately 350 boys of various races and religions make up the population of this institution. The average boy upon admittance to the Institution ranks at the upper limits of the dull-normal range of intelligence, he is retarded approximately two years academically,⁽²⁾ he has usually experienced familial or social rejection to a greater or lesser extent, he has been "processed" through the juvenile division of the probate court and he enters the School under compulsion. If then, upon admittance, or shortly thereafter, a boy could receive individual treatment within the institutional setting based upon his needs it would enhance the possibility of his educational and social growth. If criteria could be established to differentiate between accepted and non-accepted boys and this factor taken into consideration in making assignments within the regular and extra curricular programs, needs of the accepted and non-accepted boys could be met. The boys live in cottage-type units within which the population range is approximately twenty to forty boys, and supervision is carried on seven days a week by a married couple. Within this cottage setting the boys have a varied program including work assignments, athletics on an intra-mural basis, extensive hobby-work programs and other group activities. It is primarily a closed

(1) Operated under the jurisdiction of the State Dept. of Social Welfare.

(2) Taken from the Boys Vocational School Psychological Clinic's 1950 Annual Report.

social situation in which there are a tremendous number of inter-personal relationships. Except for daytime periods spent in school and/or on detail assignments the boys in any cottage live together as a group. It provides almost the perfect setting within which to study social acceptance or non-acceptance.

Two sub-groups, the accepted and non-accepted, within the cottage-life situation were investigated in this study. The accepted group consists of twenty individuals who were selected as being "liked-best" by their cottage mates for a period of three or more consecutive months. The second group consists of fifty-one individuals who were distinguished by the fact that for a period of three or more consecutive months they were never chosen as being "liked-best" by any one of their cottage mates. In this way it is believed (1) that two different sub-groups were identified for, as Jersild states:

"Among the various methods that can be used to study children's acceptance of one another are a number of so-called 'sociometric techniques'. These are relatively simple, and in many situations it is possible to apply them to obtain information that an investigator might put to practical use. In institutions where children spend all their time sociometric techniques have been used to find out whom the inmates would prefer as tablemates or as cottage mates, and the like. It is possible also to ask a variety of questions such as whom the youngster wishes to play with, go to a picnic with, or whom he would prefer to have as his best friend.

"It is also possible to get negative information by asking youngsters to name persons whom they would not especially care to have as friends or as seat mates, or as study companions, and so on. This negative approach has not been used as commonly as the positive approach since invidious information of this sort may be less reliable, and, in many circumstances, there will be children who will be embarrassed and reluctant to speak ill of their associates. Some negative information can be inferred from the positive approach. For example, if a child is not named by any one when children choose their seat mates it is quite evident that he is not especially popular."

(1) Jersild, Arthur T., Child Psychology, Prentice-Hall Inc., New York, 1950, p. 177.

METHODOLOGY

During the time a boy is in Boys Vocational School, a complete individual case history is prepared which coordinates both the previous socioeconomic history submitted by the Court and sociological and psychological data obtained during the boy's residence in the institution.

From January 1, 1949, to December 31, 1949, the Psychological Clinic of Boys Vocational School gathered sociometric data on the acceptance of individual boys within their cottages. Once each month every boy in the cottage was given a piece of paper and a pencil and asked to write down the names of the three boys in his cottage whom he liked-best; the resulting data were then (1) compiled in graphic form by the use of sociograms, and by referring to these sociograms it was possible to determine the number of votes received by each individual in the cottage each month over a period of one year. It was also possible to determine the boys who received the most votes and those who received the least votes each month. Making use of these sociograms, the two groups -- accepted and non-accepted -- were isolated, according to the criteria previously indicated. Complete sociological and psychological data were (2) made accessible to the writer. On the basis of Bonney's study of popular and unpopular children, and Moreno and Jennings' work (3) with over and under-chosen girls in a training school setting, it was felt that these two groups were isolated as far as acceptance and non-acceptance were concerned.

(1) See Appendix A

(2) Bonney, Merl E., "Popular and Unpopular Children, A Sociometric Study" Sociometry Monography, No. 9, Beacon House, 1947, p. 1-10.

(3) Moreno, J. L. and Jennings, Helen H., "Sociometric Control Studies of Grouping and Regrouping", Sociometry Monographs, No. 7, Beacon House, 1947, p. 3, f.f.

PROCEDURE

Each individual case history was investigated and the boy was classified in regard to the following thirty-three factors:

- | | |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Residence</u>
<u>Urban</u>
<u>or</u>
<u>Other</u> | <p>This information was gained from the transfer summary and/or the Court papers. Those individuals who had been residents, during their formative years prior to commitment, of Detroit and surrounding suburbs, Pontiac, Lansing, Jackson, Flint, Muskegon, Grand Rapids, Saginaw, Bay City, Port Huron, Kalamazoo, Battle Creek and Ionia were classified as urban. All other individuals were classified as "other" areas. The two groups, accepted and non-accepted, were compared on the basis of the proportion of each group coming from urban areas.</p> |
| <u>Father Alive</u>
<u>or</u>
<u>Deceased</u> | <p>Information was obtained from the transfer summary and/or Court papers and the two groups were compared as to the proportion of fathers living.</p> |
| <u>Mother Alive</u>
<u>or</u>
<u>Deceased</u> | <p>Information was obtained from the transfer summary and/or Court papers, and the two groups were compared as to the proportion of mothers living.</p> |
| <u>Parents</u>
<u>Divorced</u> | <p>Information was obtained from the transfer summary and/or Court papers, psychological and social service interview recordings. The two groups were again compared on the basis of the proportion of cases in which the parents were divorced.</p> |
| <u>Parents</u>
<u>Separated</u> | <p>Separation means that while the parents are not legally divorced, they no longer live together as man and wife in the same household. Information on this point was obtained from the transfer summary and/or other records. The two groups were again compared on the basis of the proportion of their members whose parents were separated.</p> |

Father's
Occupation

The father's Occupation was categorized as skilled or other, based upon the census classification standards presented by

(1) Landis. None of the subjects' father's occupations could be classified as professional. The two groups were then compared proportionately on this basis.

Mother's
Occupation

From the same source of information, the proportion of cases in which the mother was employed outside the home was obtained

and the two groups compared.

Father
Alcoholic

Statements of social workers, psychologists or court workers were taken as the criterion of alcoholism in the father. Ad-

mittedly, this is not entirely defensible but it proved to be the only practical method of classification of this factor. The proportions of the two groups whose fathers were classified as alcoholic, according to this definition, were then compared.

Mother
Alcoholic

The procedure was the same in regard to this classification as employed in considering alcoholism in the father and the

same limitations apply.

Father's
Education

This information was not obtainable in all cases but when available the highest grade completed was taken as the level.

Numerical designations corresponding to the number of the grade from 0 to 16 were assigned and the means of the two groups compared.

Mother's
Education

This information was not obtainable in all cases but when available the highest grade completed was taken as the level

and the same procedure followed as in father's Education.

(1) Landis, Paul H., Population Problems, American Book Co., 1943, Chap. XVII, p.p. 317 f.f.

Number of Siblings

The total number of siblings at the time of commitment was computed for each individual and the means of the two groups compared. This information was obtained from the court records.

Sibling Position

By sibling position is meant the serial position according to age. Again the means of the two groups were compared. This information was obtained from the court records.

Family Trouble

By this it is meant that one or more individuals in the immediate family in addition to the boy, had been involved in difficulty with the law even though not convicted. Again the mean number of such involvements was computed and the two groups compared.

Legitimacy of Birth

The proportion of each group which had been born out of wedlock was computed and the two groups compared on this basis.

Foster Home

The proportion of each group which had been placed in a foster home one or more times was computed and a comparison made between the groups.

Other Institutions

Information was obtained from transfer summaries and/or court papers and the proportion of each group who had previously been committed to other institutions was computed and a comparison made on this basis.

Age

The mean chronological age was found for each group and a comparison made.

Height

The mean height in inches was determined for each group and the two groups compared.

Weight

The mean weight in pounds for each group was computed and the two groups compared.

Race

Only two races were involved in these two groups. The two races involved were Negro and White and the groups were compared on the basis of the proportion of Negroes included in each.

BVS
Disciplinary
Action

In this school for boys all major discipline is decided upon and awarded by the Case Conference Committee, therefore, the mean number of appearances before this committee was computed for each group and the two groups compared.

Number of
Runaways

For each group the mean number of runaways was computed and the groups compared on this basis.

Activities

It is possible for boys in this Institution to engage in various extra-curricular activities such as: Boy Scouts, Hi-Y, BVS Players and Camera Club, etc. The two groups were compared as to the mean number of activities engaged in.

Months at
BVS

The mean length of time spent in the School before release was computed for each group and the two groups compared. Only the current commitment at the time of the sociometric measure was considered.

Times at
BVS

The two groups were compared on the mean number of commitments to Boys Vocational School. This information was obtained from the master social service index card.

Number of
Cottage Changes

The mean number of cottage changes for any reason was computed for each group and a comparison made.

Number of
Detail Changes

The mean number of detail changes for any reason was computed for each group and a comparison made.

<u>Intelligence Quotient</u>	Each individual had been given an individually administered intelligence test by a competent psychologist using (1) (2) the Wechsler-Bellevue Intelligence Scale, Form I or II.
<u>Grade Placement</u>	At the time of admission to the Institution each individual had been administered the Stanford Achievement Test, Intermediate Battery, various equivalent forms. (3) The mean grade placement of each group was computed and the groups compared.
<u>Problem Check List</u>	Each individual had been administered the Mooney Problem Check List (4) and the mean number of problems indicated was compared.
<u>Monthly Grades</u>	(5) In this training school each boy is given a letter grade in each area of his program as well as an average grade; these grades range from U to A and are graded on the customary basis of 0 points for U, 1 point for D, 2 points for C, 3 points for B and 4 points for A. The mean average mark for each group was computed and the two groups compared.
<u>Present Adjustment</u>	At the time this study was written the boys included in this study were either on parole status or had been committed to an institution following their release from Boys Vocational School. This latter category includes those who had been recommitted to Boys Vocational School. The proportion of each group which at this time was institutionalized was computed and the two groups compared.

(1) See Appendix A

(2) See Appendix B

(3) See Appendix C

(4) See Appendix D

(5) 16 points for parole consideration, 20 points for release on parole, A is excellent, B is above average, C is average, D is below average and U is unsatisfactory.

As can be noted, the accepted and the non-accepted groups were sometimes compared on the basis of mean scores and sometimes compared on the basis of proportions. Table I lists those factors which were compared on the basis of mean scores and Table II lists those factors compared on the basis of proportion.

STATISTICAL PROCEDURES

In each instance in which preliminary study revealed the possibility of significance of one of the thirty-three factors, the data was treated statistically on the basis of mean scores or on a proportional basis; using the t ratio to test the significance between the means and the proportions. In other words the writer has attempted to determine if the thirty-three factors considered have any significance in terms of acceptance or non-acceptance for the two groups which have been isolated in this study. Appropriate graphs have been provided for each significant factor.

For those factors compared on the basis of mean scores the following statistical formulae were used:

Mean equals the sum of X over N. $M = \frac{\sum X}{N}$

Standard deviation equals 1 over N times the square root of N times the (sum of X squared), minus (the sum of X)². $\sigma = \frac{1}{N} \cdot \sqrt{N \cdot (\sum X^2) - (\sum X)^2}$

Standard error of the mean equals standard deviation over the square root of N minus 1. $\sigma_M = \frac{\sigma}{\sqrt{N-1}}$

Standard error of the difference between means equals the square root of the standard error of mean 1 squared, plus the standard error of mean 2 squared. $\sigma_{diff M_1 - M_2} = \sqrt{\sigma_{M_1}^2 + \sigma_{M_2}^2}$

To test the significance of the difference between means, the t ratio was utilized. This is obtained by the formula:

M1 minus M2 over standard error of the difference between means. $t = \frac{M_1 - M_2}{\sigma_{diff}}$

The degrees of freedom to be utilized is found by the formula: N minus 2; with sixty-nine degrees of freedom a t of 1.999 is required for the difference to be significant at the 5% level and a t of 2.659 is required for significance at the 1% level.

For those factors compared on a proportional basis the following formulae were used:

The standard error of a proportion equals the square root of $p \cdot q$ over N , where p equals the proportion of a sample having the characteristic under consideration and q equals 1 minus p .

$$\sigma_p = \sqrt{\frac{p \cdot q}{N}}$$

The standard error of the difference between proportions is obtained by the formula:

The standard error of the difference of proportions equals the square root of the standard error of proportion 1 squared plus the standard error of proportion 2 squared.

$$\sigma_{p_1 - p_2} = \sqrt{\sigma_{p_1}^2 + \sigma_{p_2}^2}$$

The t ratio to determine the significance of the difference between proportions is obtained by the formula:

t equals p_1 minus p_2 over the standard error of the difference of proportions with degrees of freedom being determined by the formula n minus 2.

$$t = \frac{p_1 - p_2}{\sigma_{p_1 - p_2}}$$

With sixty-nine degrees of freedom a t of 1.999 is required for the difference to be significant at the 5% level, and a t of 2.659 is required for significance at the 1% level.⁽¹⁾

(1) Guilford, J. P., Fundamental Statistics in Psychology and Education, McGraw-Hill Book Co., Inc., New York, 1942 p.p. 156 f.f.

Hodgman, Charles D., Mathematical Tables from Handbook of Chemistry and Physics, Chemical Rubber Publishing Co., Cleveland, Ohio, 1941, p.74 f.f.

RESULTS AND INTERPRETATIONS

(1)

It can be seen from Tables I and II that by means of the previously described statistical methods, eleven of the thirty-three factors considered revealed significant differences between the accepted and non-accepted groups. These differences are also presented graphically for the eleven factors which proved significant.

BWS
Disciplinary
Action

When the two groups are compared on the basis of appearance before the discipline case conference, there is a difference in means of 2.60, this difference being statistically significant at the 1% level of confidence with a t ratio of 2.85. This difference could have arisen by chance in only one out of a hundred similar samplings and indicates that the accepted group present fewer major disciplinary problems than does the non-accepted group. See Graph I following:

Accepted	XXXXXXXXXXXX	Mean: 2.9
Non-accepted	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	Mean: 5.5
	(Means multiplied by 5)	

Thus accepted boys were involved in less difficulty which called for official case conference action such as runaways, obscene language, destruction of property, fighting, stealing, etc. Jennings⁽²⁾ found the under-chosen subjects in her study to show "quarrelsome and irritable behavior" five times as often as average subjects, while the over-chosen subjects show only one-third as great incidence of such behavior as the average chosen subjects. Such behavior is evidenced by the data in this study and certainly does not lead to acceptance.

(1) See Pages 34 and 35 respectively

(2) Jennings, Helen Hall, Leadership and Isolation, Longmans, Green and Co., New York, 1943, p. 151.

Activities A comparison of the mean number of activities engaged in by these two groups reveals a difference of 1.24, resulting in a t ratio of 6.63 which is statistically significant of at least the 1% level and indicates that this large difference could have arisen by chance in only one out of a hundred samplings. See Graph II following:

Accepted	XXXXXXXXXXXXXXXXX	Mean: 1.45
Non-accepted	XX	Mean: 0.21

The activities factor shows the accepted group engaging in more extra curricular activities than the non-accepted. Acceptance within the School setting would seem to have a spreading effect; the accepted boy as judged by our criteria, feels freer to actively seek membership in extra-curricular activities.

Months
at
BWS A comparison of the two groups on the basis of the duration of institutionalization revealed a difference of 4.94 months in favor of the accepted group. With a t ratio of 4.84 this difference is statistically significant at beyond the 1% level. See Graph III following:

Accepted	XXXXXXXXXX	Mean: 9.25
Non-accepted	XXXXXXXXXXXXXXXXXX	Mean: 14.2

This finding indicates that the accepted group remains in the institution for a significantly shorter period than does the non-accepted. This was expected since longer residence results from either running away, or appearance before the Discipline Case Conference, and the Runaway Factor proved to be significant at the 5% level and the Discipline Case Conference at 1%.

Number of
Detail Changes

When the two groups are compared on the basis of their mean number of detail changes, there is a difference of 3.70 in favor of the accepted group with a t ratio of 3.62, which is significant at the 1% level of confidence. See Graph IV following:

Accepted	XXXXX	Mean: 4.80
Non-accepted	XXXXXXXXXX	Mean: 8.50

The fact that the accepted group has almost fifty percent fewer changes in assignments than the non-accepted group indicates that there is a significant difference in this aspect of behavior in favor of the accepted group. The accepted group demonstrated the ability to make a smoother adjustment to their training assignments than the non-accepted. The non-accepted boy seems to have more transitory interests, is more easily discouraged and experiences difficulty in finding a detail assignment which for him is purposeful.

Number of
Runaways

A comparison of the two groups on the basis of the mean number of runaways reveals a difference of 1.6 in favor of the accepted group with a t ratio of 2.08. This is statistically significant at the 5% level of confidence. See Graph V following:

Accepted	XXXXXXXXXX	Mean: 1.1
Non-accepted	XXXXXXXXXXXXXXXXXXXX	Mean: 2.7

The non-accepted group might be expected, because of at least passive rejection by their sociological environment, to have a higher incidence of withdrawal in the form of running away. The accepted group apparently has more satisfying personal relationships with a feeling of "belonging", and is not subjected to group rejection as is the case with the non-accepted.

Problem
Check List

When the two groups are compared in regard to the mean number of problems indicated on the Mooney Problem Check List, there is a difference of 18.80 in favor of the accepted group. This gives a t ratio of 2.46 which is statistically significant at beyond the 5% level of confidence and indicates that a difference this large could have arisen by chance less than five times out of a hundred. See Graph VI following:

Accepted	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	Mean: 24.60
Non-accepted	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Mean: 43.40

The fact that the non-accepted group underlined (43.40) almost twice as many personal and social problems than did the accepted group (24.60), seems to indicate that the non-accepted group has more fears and real or imagined problems than does the accepted group. These projected problems for the non-accepted group reflect their inadequacies, relate to and perhaps help explain, some of the difficulties the non-accepted group has in the areas of cottage changes, activities, detail changes and runaways.

Cottage
Changes

When the two groups are compared in regard to the mean number of cottage changes, there is a difference of .92 in favor of the accepted group with a t ratio of 3.28 which is significant at the 1% level. See Graph VII following:

Accepted	XXXXXX	Mean: .55
Non-accepted	XXXXXXXXXXXXXXXXXXXX	Mean: 1.47

Experience seemed to suggest that accepted boys should tend to remain fixated socially and not evidence as much movement between groups, since by virtue of their acceptance they are enjoying satisfactory inter-personal

relationships. On the other hand, we might expect more social movement on the part of the non-accepted. This supposition is found to hold true; social acceptance apparently creates feelings of personal adequacy for the one group -- accepted, and acts as a stabilizing influence, while non-acceptance has the opposite effect upon the non-accepted group.

Residence When the two groups are compared on the basis of residence,
Urban or
Other there is a difference of .23 in favor of the accepted group
 with a t ratio of 2.87 which is significant at the 1% level
 of confidence. See Graph VIII following:

Accepted	XXXXXXXXXX	Mean: .95
Non-accepted	XXXXXXX	Mean: .72

The fact that the accepted group had a significantly higher proportion of urban youth may be the result, in some part, of this environment for as
 (1)
 Burgess and Locke state:

Urban areas present a more conflicting, emotional sphere of action in which the individual is likely to be a member of secondary groups rather than primary groups.

(2)
 Also Landis states:

Competition and adjustment are more difficult and yet at the same time in the complexities of an urban environment the individual develops more social selves because of his participation in groups which advocate different values.

The urban youth considered in this study may have had opportunity for greater practice to develop the kind of large group adjustment social skills which may in part assist them in adjusting to the institutional setting.

(1) Burgess, Ernest W., and Locke, Harvey J., The Family, American Book Co., New York, 1945, p. 119 f.f.

(2) Landis, Paul H., Adolescence and Youth, McGraw-Hill Book Co., Inc., New York and London, 1945. p.p. 126, 127.

The boys in the study from other than urban areas, which includes small towns, villages and farm areas, are by comparison, "subjected to different forms of social control and operate in fewer, though for the most part, primary groups".⁽¹⁾ According to Redfield,⁽²⁾ "village and farm area cultures present a more stable group pattern, and in general, the culture maintains more consistent common standards, the family does not suffer as breakdown. Mores and social customs are more strictly enforced." Thus it would seem that the boy who comes from other than urban areas probably feels inadequate within the social situation which confronts him in the cottage situation at Boys Vocational School because of the lack of participation in different social groups.

roster Home
Experience

From Table 11 (page 35) it can be seen that 5% of the accepted group had been placed in boarding homes while 68% of the non-accepted had such experiences. With a t ratio of 3.37 this difference is statistically significant at beyond the 1% level of confidence. See Graph IX following:

Accepted	XXXXXXXXXX	Mean: .95
Non-accepted	XXXXXXX	Mean: .68

The most favorable circumstances for the development of a satisfactory parent-child relationship are those that may exist in the so-called normal home -- that is, one in which the household contains, without antagonism, man and wife with their own children. A well-rounded social personality is

(1) Landis, Paul H., Adolescence and Youth, McGraw-Hill Book Co., New York, 1945. p. 119.

(2) Redfield, Robert, The Folklore of Yucatan, University of Chicago Press, Chicago, 1946, p. 132 f.f.

dependent to a great extent upon familial training and environment. (1)

(2)
The Gluecks found that 69.7% of a sample of 654 juvenile delinquents (3)
had lived in foster homes. As Bell points out:

Children living under these conditions have fewer chances for adequate physical care, love, and counselling. The existence of intra-familial tensions and conflicts, which are also not unknown even in the normal home, affects the emotional security of the children.

It would seem, then, that the non-accepted group has suffered to a greater degree than the accepted from lack of parental control and social training. The non-accepted boy has greater insecurity in dealing with new social situations such as Boys Vocational School because he has lacked this early training (4)
and guidance. Ford also stresses this when he says:

The foster home, which is classified as a form of broken home, furnishes a higher proportion of delinquents than do the child care institutions.

The 691 subjects of Ford's study were convicted delinquents in four institutions in Pennsylvania.

(1) Jersild, Arthur T., Child Psychology, Prentice-Hall, Inc., New York, 1950, p.p. 584-585.

(2) Glueck, Sheldon and Eleanor T., One Thousand Juvenile Delinquents, Harvard University Press, Cambridge, 1934, p. 92.

(3) Bell, Marjorie, "The Trouble in these Broken Homes", Nervous Child, 3, 53-58, 1943.

(4) Ford, C. A., "Institutional Rearing as a Factor in Delinquency", Proceedings Fourth Conference Child Research Clinic, 40-45, 1938.

Family
Trouble

From Table II (page 35) it can be seen that only 15% of the accepted group had one or more members of the family involved in difficulty with the law while 56% of the non-accepted group were characterized by this factor. With a t ratio of 3.72, this difference proves to be statistically significant at beyond the 1% level of confidence. See Graph X following:

Accepted XXXXXXXXXXXXXXXXXX

Non-accepted XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Accepted Prop. .15 Non-Accepted Prop. .56

The factor family Trouble was selected for study because of the conditioning within the home and the effect it has on the child's personal and social growth. Children who mature through the formative years in a home environment which is criminal and anti-social probably are not influenced as strongly in the direction of socially accepted behavior as those living in more benign familial environments. Significant corroboration of these findings is found in related research literature, particularly in studies by (1) Stury, (2) the Gluecks and (3) Kvaraceus, which show that delinquent families have a delinquency pattern continuing from childhood through adulthood. Stury found 33% of the fathers, 9% of the mothers and 36% of the siblings had been convicted of crime in his study of delinquent youth in a German institution. The Gluecks reveal that in 918 families there was an official criminal record

(1) (Secondary Source) Stury, Richard, "Die ausseren Entwicklungsbedingungen junger Rechtsbrecher", Kriminalistische Abhandlungen, No. 32, 1938.

(Primary Source) Sullenger, Thomas Earl, Social Determinants in Juvenile Delinquency, John Wiley & Sons, Inc., New York, 1936.

(2) Glueck, Sheldon and Eleanor T., One Thousand Juvenile Delinquents, Harvard University Press, Cambridge, 1934, p. 79.

(3) Kvaraceus, William C., Juvenile Delinquency and the School, World Book Co., New York, 1945, p. 77.

for parents or siblings in 532, or 57.9% of the cases. Kvaraceus' report on New Jersey Juvenile Court Cases revealed that more than 50% of other family members were in trouble. It is probable that in such homes there will be insufficient parental guidance or when there is guidance it will be in the wrong direction. Symonds⁽¹⁾ points out the basic insecurity and resulting behavior of poor parental guidance when he states:

Because of neglect or misdirection which conflicts with society, the delinquent is likely to become rebellious, hostile, jealous, attention-getting, annoying or hyper-active. Another type of reaction to the feeling of insecurity is a complex feeling of humiliation, leading to isolation and timidity.

Race The Race factor revealed that 45% of the accepted group were Negroes while only 8% of the non-accepted group were Negroes. With a t ratio of 3.08, this difference is statistically significant at beyond the 1% level of confidence.

Accepted XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX Prop. .45

Non-accepted XXXXXX Prop. .08

(2)

Most students of racial prejudice feel that prejudices, whether racial, religious etc., are learned and that patterns become more varied as the individual grows older. Horowitz's⁽³⁾ study demonstrates very well the increasing prejudice from kindergarten through the 8th grade. The expected results for this factor would be that Negroes would be proportionately high in the non-accepted group and relatively low in the accepted group. This data reflects

(1) Symonds, Percival M., The Psychology of Parent-Child Relationships, D. Appleton-Century Inc., New York, 1939.

(2) Krech, David, and Crutchfield, Richard S., Theories and Problems of Social Psychology, McGraw-Hill Book Co., Inc., 1948, p.p. 443 f.f.

(3) Horowitz, E. L., "The development of Attitudes Toward the Negro", ARCH. PSYCHOL., 28, No. 194.

just the reverse. The opposite results of what was expected in this factor of the study are based upon selectivity within the Negro group. In other words, there may have been a tendency for colored boys to choose members of their own race and not such a tendency for white boys to choose their own race and exclude Negroes. This is not to imply that the Negro subjects were evidencing prejudice against their white cottage-mates, but that perhaps in such a closed social situation as cottage life presents, there was more ethnocentric feeling on the part of the Negro group. This supposition is given weight by the following: in one cottage for one month the pattern of selection was broken down and it developed that out of a total of fifty-five choices, the percent of colored boys chosen by the total group equalled 38%; the percent of the total cottage population who were colored was 12.6%. Four colored boys were chosen twenty-one times, three colored boys made nine choices, these three colored boys chose colored boys eight out of nine choices which resulted in 89% of the colored boys choosing members of their own race. A study of other cottages showed like results although the percentages were somewhat lower. In view of these findings, it is doubtful as to how much weight can be ascribed to acceptance in connection with the race factor in the training school situation.

There were several other factors of the thirty-three selected which, upon preliminary examination, seemed to merit statistical investigation. In each factor the resulting t score was not significant at either the 5% or 1% level, but they did demonstrate varying tendencies between the two sub-groups of the study.

Examination of the data covering family breakdown within the two groups, that is, Parents Deceased, Divorced or Separated, revealed that the accepted

group has less total breakdown. Statistically the accepted group had 10% less death of either parent; 12% less divorce; but 12.5% more separation. The separations which may end in divorce would tend to decrease the difference between the two groups on these two factors. Although eventual divorce is supposed, it cannot be factually stated. Divorce and separation resulted in t scores of 1.0 and 1.19; therefore, neither of these two factors is significantly differentiating. Several studies⁽¹⁾ show larger proportions of broken homes by death, divorce and separation than is the case with this sample.

The factor of fathers Occupation was broken down into two categories, skilled and other, because of the preponderance of unskilled in both groups, and the fact that statistically it would have been impossible to treat the data in a more refined manner. The two groups proportioned on this basis resulted in the accepted group having a somewhat lower proportion of fathers with skilled jobs, .79, as compared to .85 for the non-accepted. The resulting t score of .73 shows no significant difference between the groups. The fathers Occupation factor for the two groups approximates the findings of⁽²⁾ Sullenger, who in his study of 110 delinquents, found that 85.4% of the father's occupations were unskilled, and 14.6% were equally divided between semi-skilled and skilled. It would appear that both groups in this study are essentially products of the same economic backgrounds, and for all purposes they have had similar economic advantages or disadvantages.

(1) Hodjkiss, Margaret, "The Influence of Broken Homes and Working Mothers", Smith College Studies in Social Work, March, 1933.

Elmer, M.C., Family Adjustment and Social Change, Farrar and Rinehart and Co., New York, 1932, p. 175.

(2) Sullenger, T. E., Social Determinants in Juvenile Delinquency. Douglas Printing Co., Omaha, Nebraska, 1930, p. 43.

The mothers were compared for the two groups in terms of being employed, and not as to job classification. It was assumed that supervision, or lack of it from the mother was more important than the type of employment. This assumption seems to be supported by current psychological thought concerning the importance of parent-child relationships. According to the statistical procedures utilized, the t ratio of .20 is not significant. The small proportion of employed mothers is in large part due to the economic situation (1) at the time the data were gathered. According to Wiers, the urban areas of Michigan were experiencing a peak employment situation with the result that mothers were not seeking employment to supplement the family income. Approximately one in five mothers was employed in the two groups; this proportion varies from the Glueck study (2) of 937 families, of which 389 mothers, or 51.5%, supplemented the family income. Their study, done in the depression year 1934, gives weight to the economic factor discussed above.

Alcoholism of fathers when compared resulted in a t ratio of only .09, denoting no significant difference between the accepted and non-accepted groups. Large proportions of both groups, .79 for accepted and .78 for non-accepted, who were not considered to be alcoholic as based on reports from social workers, psychologists, court and probation workers, are at variance (3) with other studies examined. Alcoholism on the part of the mother revealed a t ratio of .16 which is not significant.

(1) Wiers, Paul, Economic factors in Michigan Delinquency, Columbia University Press, New York, 1944.

(2) Glueck, Sheldon and Eleanor T., One Thousand Juvenile Delinquents, Harvard University Press, Cambridge, 1934, p. 71.

(3) Channing, Alice, "Alcoholism Among Parents of Juvenile Delinquents", Social Service Review, 1:3, Sept., 1927.

The factor Present Adjustment disclosed that 25% of the accepted group and 39% of the non-accepted group are in other penal institutions or Boys Vocational School; this spread of 14% results in a t ratio of 1.18, which is not significant. It does, however, demonstrate some evidence that the accepted boys have a slightly better chance than the non-accepted.

Although the t ratio for the factor Other Institutions is only .83 and therefore not significant, it is interesting to note that 30% of the accepted boys had been in other institutions, while only 10% of the non-accepted had other institutionalized training prior to their commitment, to Boys Vocational School. One explanation of this percentage trend is that the accepted group, upon arrival at Boys Vocational School, had more knowledge of institutional jargon, routine, methods of gaining favor, etc., than the non-accepted and therefore found assimilation and acceptance easier.

The factor of Father's Education showed a very slight statistical difference between the two groups; the mean difference of 1.02 yielding a t ratio of 1.14, which is not significant at either the 5% or 1% level. It is inferred that father's Schooling has approximately chance relationship when considering acceptance.

Legitimacy of Birth, Mother's Education, Number of Siblings, Sibling Position, Age, Height, Weight, Times at Boys Vocational School, I.Q., Grade Placement and Monthly Grades revealed differences that were so small it was obvious they would not be discriminative factors in acceptance within the two sub-groups of this study.

CONCLUSIONS

This sociometric study of two sub-groups, accepted and non-accepted boys at Boys vocational School, resulted in the following conclusions:

1. Differences among delinquents are as large for some socio-psychological factors as those which supposedly differentiate the delinquent from the non-delinquent. Individual differences in intelligence, height, weight, age and economic factors have no greater range and less statistical importance than social-psychological factors such as group participation (Activities), Other family Members in Trouble, Cottage Changes, etc.⁽¹⁾

2. Significant differences between the two groups are centered around social situations; Disciplinary Action or social aggression, Number of Runaways or social retreat, Activities or social participation, Problem Check List or social and personal insecurity, Residence or social interaction and roster Home or sociological displacement. All these factors proved to be significant when measured by the statistical procedures utilized in this study at either the 5% or 1% level.

3. Race and family Trouble are also closely allied to the social sphere of the individual's life, and the accepted and non-accepted are singularly differentiated in these areas of human interaction. Boys at Boys Vocational School, especially the non-accepted, appear to lack those social traits which are vital to establishing close personal relationships. Instead they can be observed to demonstrate, within this Institution at least, personality traits of introspection, fearfulness and/or various attention-

(1) See Tables I and II

seeking behavior patterns. They have not yet learned the lessons of social compliance; that they cannot indiscriminately evidence the impulsiveness and desires that they have without getting into difficulty with society (cottage parents and other boys) or creating conflicts within themselves. This social immaturity is more marked in members of the non-accepted subgroup than in the accepted in this study. They have not yet fully learned that such behavior will result in retribution in one way or another. The non-accepted boys' immaturity and fearfulness is evidenced by his higher incidence of running away, disciplinary action, detail changes, cottage changes, etc. The real tragedy for these boys is that although they may sense and value their needs, they too often fail altogether to comprehend why they do not measure up to their group's standards.

4. The writer thinks, that on the basis of his work with these delinquent youths in recreation, counselling and home life, that delinquent youth are not, as a group, significantly different from non-delinquent youth in desires and objectives; their aspirations are just as vital and demand fulfillment as strongly as any adolescent. They differ, however, in the social acceptability of their method of satisfying their needs or gaining their objectives. It is felt that in dealing with these two sub-groups it is of vital importance that concern and work be directed toward investigating the social forces within the boy's life which have produced his individual behavior pattern, and not with custodial control to prevent further legally defined delinquent acts. Delinquent youth, particularly the non-accepted subgroup, have feelings of irresponsibility, resentment and cruelty; they are more emotionally unstable and with their sudden changes in emotions and conduct they are difficult to work with successfully. There is often

wide divergence between their ambition and achievements because of a lack of self-confidence and self-assurance. Any approach to correct these asocial trends must include a plan whereby the social strivings of the individual will be satisfied in a way that is compatible with the social standards of the group in which he is living.

IMPLICATIONS

The results of this study indicate it is possible to differentiate among delinquents on the variable of peer acceptance. This would seem to be an important first step towards an adequate differential diagnosis in dealing with delinquents. Since eleven out of the thirty-three factors considered differentiate the two groups, these findings would seem to have several implications both in terms of practical application and further research.

Only one major socio-psychological characteristic was used to differentiate the two sub-groups in this study, namely, acceptance among peers within the institution. The factors which discriminate along this dimension may or may not prove discriminating along other dimensions of behavior such as aggressiveness, neuroticism, treatability, etc., and these relationships need to be investigated in order to make an adequate differential diagnosis.

The fact that five of the eleven factors which differentiated the two groups deal with pre-institutional experiences seems to hold some promise of allowing us to predict at the time of institutionalization an individual's peer acceptance within the institution. This may enable us to institute appropriate treatment on this basis, e. g., in initial cottage assignment, detail (vocational) assignment, for intensive individual counselling and personal guidance and for developing programs and opportunities for these individuals to practice and learn the social skills involved in group living. This obviously needs to be investigated more thoroughly.

Post-institutional treatment which would increase the peer acceptance of the non-accepted group might prove to be of value for the ultimate social adjustment of these individuals. This would seem to be a logical extension of the institutionalization although quite probably it would necessitate a revision in the philosophy of many people who expect a relatively brief period of institutionalization to bring about marked changes in the behavior of individuals. If this type of treatment were possible the effectiveness of the diagnostic efforts of the institution would be greatly increased.

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TABLE I

T Scores Based Upon Means

Factor	N	M	SIGMA	N	M	SIGMA	DIFF.	t	5%	1%
Father's Education	17	8.6	3.11	43	7.58	2.71	1.02	1.14	-	-
Mother's Education	16	7.5	----	42	7.90	----	0.40	----	-	-
No. of Siblings	20	4.9	----	51	4.86	----	0.04	----	-	-
Sibling Position	20	2.8	----	51	2.94	----	0.14	----	-	-
Age	20	15.0	----	51	14.30	----	0.70	----	-	-
Height	20	64.45	4.02	51	63.41	3.57	1.04	.99	-	-
Weight	20	124.7	22.01	51	116.20	24.46	8.5	1.44	-	-
No. of Disciplinary Actions	20	2.9	2.96	51	5.5	4.35	2.60	2.85	-	**
No. of Runaways	20	1.1	1.71	51	2.7	4.71	1.6	2.08	**	-
Activities	20	1.45	1.21	51	0.21	0.53	1.24	6.63	-	**
Months at BVS	20	9.25	2.73	51	14.2	5.76	4.94	4.84	-	**
Times at BVS	20	1.75	----	51	1.72	----	0.03	----	-	-
Detail Changes	20	4.80	3.53	51	8.50	4.37	3.70	3.62	-	**
I. Q.	20	88.70	13.11	51	86.0	13.85	2.70	0.79	-	-
Grade Placement	20	5.93	----	49	5.0	----	0.93	----	-	-
Problem Check List	16	24.60	20.47	44	43.4	39.02	18.80	2.46	**	-
Monthly Grades	19	28.57	27.03	49	32.0	18.45	3.43	0.49	-	-
Cottage Changes	20	.55	.92	51	1.47	1.36	.92	3.28	-	**

TABLE II -- T Scores Based Upon Proportions

FACTOR	Accepted				Non-accepted				DIFF	t ²	5%	1%
	N	P	Q	σ^2	N	P	Q	σ^2				
Residence	20	.95	.05	.0489	50	.72	.28	.0632	.23	2.87	-	*
Father Alive	20	.90	.10	.0670	51	.86	.14	.0489	.04	.50	-	-
Mother Alive	20	.90	.10	.0670	51	.84	.16	.0519	.06	.20	-	-
Divorced	20	.80	.20	.0894	51	.69	.31	.0632	.11	1.0	-	-
Separated	20	.75	.25	.0969	51	.88	.12	.0458	.13	1.19	-	-
Father's Occupation	19	.79	.21	.0933	48	.85	.15	.0519	.08	.73	-	-
Mother's Occupation	20	.80	.20	.0894	50	.82	.18	.0538	.02	.20	-	-
Father Alcoholic	20	.79	.21	.0911	50	.78	.22	.0583	.01	.09	-	-
Mother Alcoholic	20	.95	.05	.0489	50	.94	.06	.0331	.01	.16	-	-
Legitimacy of Birth	20	.90	.10	.0671	51	.90	.10	.0424	.00	.00	-	-
Foster Home	20	.95	.05	.0489	51	.68	.32	.0656	.27	3.37	-	*
Other Institutions	20	.70	.30	.1024	51	.80	.20	.0557	.10	.83	-	-
Race	20	.45	.55	.1114	51	.08	.92	.0374	.37	3.08	-	*
Family Trouble	20	.15	.85	.0884	50	.56	.44	.0700	.41	3.72	-	*
Present Adjustment	20	.25	.75	.0969	51	.39	.61	.0685	.14	1.18	-	-

TABLE III

MEANS AND PROPORTIONS OF THE THIRTY-THREE FACTORS

<u>Classification</u>	<u>Accepted</u>	<u>Non-accepted</u>
Residence		
Urban.	95	72
Other.	05	28
Father Alive	90	86
" Deceased.	10	14
Mother Alive	90	84
" Deceased.	10	16
Divorced	20	32
Married.	80	68
Separated.	25	12
Together	75	88
Father's Occupation		
Unskilled.	79	85
Skilled.	21	15
Mother's Occupation		
Housewife.	80	82
Employed	20	18
Father Alcoholic	21	22
Non-Alcoholic.	79	78
Mother Alcoholic	05	06
Non-Alcoholic.	95	94
Father's Education . .		
Total Grades	146	325
N.	17	43
Mean	8.6	7.58
Mother's Education		
Total Grades	121	335
N.	16	42
Mean	7.5	7.9
No. of Siblings		
Total No.	99	248
N.	20	51
Mean	4.95	4.86

TABLE III (Cont.)

<u>Classification</u>	<u>Accepted</u>	<u>Non-accepted</u>
Activities		
Total No. Activities.	29	11
N.	20	51
Mean.	1.45	0.21
Months at BVS		
Total No. Months	185	724
N.	20	51
Mean.	9.25	14.2
Times at BVS		
Total No. Times	35	88
N	20	51
Mean.	1.75	1.72
Cottage Changes		
Total No. Changes	11	66
N	20	51
Mean.	0.55	1.3
Detail Changes		
Total No. Changes	96	434
N	20	51
Mean.	4.8	8.5
I.Q.		
Total I.Q.'s.	1774	4388
N	20	51
Mean.	88.7	86.0
Grade Placement		
Total No. Grades.	118.73	249.60
N	20	49
Mean.	5.93	5.0
Problem Check List		
Total No. Problems.	394	1913
N	16	44
Mean.	24.6	43.4
Present Adjustment		
On Parole	84	61
Other Institutions.	16	39
Monthly Grades		
Total No. Grades.	543	1571
N	19	49
Mean.	28.57	32.0

TABLE III (Continued)

<u>Classification</u>	<u>Accepted</u>	<u>Non-accepted</u>
Sibling Position		
Total No. Positions.	55	150
N.	20	51
Mean	2.75	2.94
Family Trouble		
In Trouble	15	56
Not in Trouble	85	44
Legitimacy of Birth		
Legitimate	90	90
Illegitimate	10	10
Boarding Home		
In Boarding Home	05	32
Not in Boarding Home	95	68
Other Institutions	30	20
Not in Other Institutions.	70	80
Age		
Total No. Years.	300	733
N.	20	51
Mean	15	14.3
Height		
Total No. inches	1289	3234
N.	20	51
Mean	124.7	116.2
Weight		
Total No. Pounds	2494	5931
N.	20	51
Mean	124.7	116.2
Race		
White.	55	92
Colored.	45	08
BVS Disciplinary Action		
Total No. Disciplines.	59	280
N.	20	51
Mean	2.9	5.5
Number of Runaways		
Total No.	23	141
N.	20	51
Mean	1.1	2.7

Cottage: Vermont Hall
Date: 6/5/49
By: R. Harrington

APPENDIX A

ART
10

9

8

IVAN

7

NOLAN OBIE

6

BOB CHARLIE DON ED

5

GEORGE FRED HOWARD ISADOR

4

JOE KEN LOU MIKE EDGAR

3

PETER QUIGLEY ROGER

2

1

AL BILL CARL DICK TOM

0

WECHSLER-BELLEVUE INTELLIGENCE SCALE

FOR ADOLESCENTS AND ADULTS

 RECORD
FORM

I

 NAME _____ AGE _____ EDUC. _____ DATE OF EXAM. _____ NO. _____
 OCCUP. _____ NAT. _____ BIRTHDATE _____ COLOR _____
 PLACE OF EXAM. _____ EXAM. BY _____ PREVIOUS EXAM. _____

TABLE OF WEIGHTED SCORES†												
Equivalent Weighted Score	RAW SCORE										Equivalent Weighted Score	
	Information	Comprehension	Digit Span	Arithmetic	Similarities	Vocabulary	Picture Arrangement	Picture Completion	Block Design	Object Assembly		Digit Symbol
18	25	20		14	23-24	41-42	20+		38+			18
17	24	19	17	13	21-22	39-40	20		38	26		17
16	23	18	16	12	20	37-38	19		35-37	25	66-67	16
15	21-22	17		11	19	35-36	18	15	33-34	24	62-65	15
14	20	16	15		17-18	32-34	16-17	14	30-32	23	57-61	14
13	18-19	15	14	10	16	29-31	15	13	28-29	22	53-56	13
12	17	14		9	15	27-28	14	12	25-27	20-21	49-52	12
11	15-16	12-13	13		13-14	25-26	12-13		23-24	19	45-48	11
10	13-14	11	12	8	12	22-24	11	11	20-22	18	41-44	10
9	12	10	11	7	11	20-21	10	10	18-19	17	37-40	9
8	10-11	9			9-10	17-19	9	9	16-17	16	33-36	8
7	9	8	10	6	8	15-16	7-8	8	13-15	14-15	29-32	7
6	7-8	7	9	5	7	12-14	6	7	11-12	13	24-28	6
5	6	5-6			5-6	10-11	5		8-10	12	20-23	5
4	4-5	4	8	4	4	7-9	4	6	6-7	10-11	16-19	4
3	2-3	3	7	3	3	5-6	2-3	5	3-5	9	12-15	3
2	1	2	6		1-2	3-4	1	4	1-2	8	8-11	2
1	0	1		2	0	1-2	0	3	0	7	4-7	1
0		0	5	1		0		2		5-6	0-3	0

SUMMARY		
TEST	R.S.	WT.S.
INFORMATION		
COMPREHENSION		
DIGIT SPAN		
ARITHMETIC		
SIMILARITIES		
(VOCABULARY)	()	()
VERBAL SCORE*		
P. ARRANGEMENT		
P. COMPLETION		
BLOCK DESIGN		
OBJECT ASSEMBLY		
DIGIT SYMBOL		
PERFORMANCE SCORE*		
TOTAL SCORE		
*Proration is necessary if four or six Verbal tests are given or four Performance tests.		
VERBAL SCALE _____ I.Q. _____		
PERFORM. SCALE _____ I.Q. _____		
FULL SCALE _____ I.Q. _____		

†Clinicians who wish to draw a "psychograph" on the above table may do so by connecting the appropriate raw scores; however, one must recognize the relative unreliability of these subtest scores when they are thus treated.

TEST ANALYSIS AND OBSERVATIONS

1. INFORMATION	Score
(PRESIDENT)	
1 BEFORE	
2 THERMOMETER	
3 RUBBER	
4 LONDON	
5 PINTS	
6 WEEKS	
7 ITALY	
8 JAPAN	
9 HEIGHT	
10 PLANE	
11 BRAZIL	
12 PARIS	
13 HEART	
14 HAMLET	
15 POPULATION	
16 WASHINGTON	
17 POLE	
18 EGYPT	
19 H. FINN	
20 VATICAN	
21 KORAN	
22 FAUST	
23 H. CORPUS	
24 ETHNOLOGY	
25 APOCRYPHA	

2. COMPREHENSION	Score
1 ENVELOPE	
2 THEATER	
3 BAD COMPANY	
4 TAXES	
5 SHOES	
6 LAND IN CITY	
7 FOREST	
8 LAWS	
9 MARRIAGE	
10 DEAF	

3. DIGITS FORWARD	DIGITS BACKWARD
5, 8, 2	6, 2, 9
6, 9, 4	4, 1, 5
6, 4, 3, 9	3, 2, 7, 9
7, 2, 8, 6	4, 9, 6, 8
4, 2, 7, 3, 1	1, 5, 2, 8, 6
7, 5, 8, 3, 6	6, 1, 8, 4, 3
6, 1, 9, 4, 7, 3	5, 3, 9, 4, 1, 8
3, 9, 2, 4, 8, 7	7, 2, 4, 8, 5, 6
5, 9, 1, 7, 4, 2, 8	8, 1, 2, 9, 3, 6, 5
4, 1, 7, 9, 3, 8, 6	4, 7, 3, 9, 1, 2, 8
5, 8, 1, 9, 2, 6, 4, 7	9, 4, 3, 7, 6, 2, 5, 8
3, 8, 2, 9, 5, 1, 7, 4	7, 2, 8, 1, 9, 6, 5, 3
2, 7, 5, 8, 6, 2, 5, 8, 4	
7, 1, 3, 9, 4, 2, 5, 6, 8	

5. SIMILARITIES	Score
1 ORANGE — BANANA	
2 COAT — DRESS	
3 DOG — LION	
4 WAGON — BICYCLE	
5 PAPER — RADIO	
6 AIR — WATER	
7 WOOD — ALCOHOL	
8 EYE — EAR	
9 EGG — SEED	
10 POEM — STATUE	
11 PRAISE — PUNISHMENT	
12 FLY — TREE	

4. ARITHMETIC							
	T	RorW	SC.		T	RorW	SC.
1 (15")				6 (30")			
2 (15")				7 (60")			
3 (15")				8 (60")			
4 (30")				9 (120")			
5 (30")				10 (120")			

5A. VOCABULARY		Score
1	APPLE	
2	DONKEY	
3	JOIN	
4	DIAMOND	
5	NUISANCE	
6	FUR	
7	CUSHION	
8	SHILLING	
9	GAMBLE	
10	BACON	
11	NAIL	
12	CEDAR	
13	TINT	
14	ARMORY	
15	FABLE	
16	BRIM	
17	GUILLOTINE	
18	PLURAL	
19	SECLUDE	
20	NITROGLYCERINE	
21	STANZA	
22	MICROSCOPE	
23	VESPER	
24	BELFRY	
25	RECEDE	
26	AFFLICTION	
27	PEWTER	
28	BALLAST	
29	CATACOMB	
30	SPANGLE	
31	ESPIONAGE	
32	IMMINENT	
33	MANTIS	
34	HARA-KIRI	
35	CHattel	
36	DILATORY	
37	AMANUENSIS	
38	PROSELYTE	
39	MOIETY	
40	ASEPTIC	
41	FLOUT	
42	TRADUCE	
		</

RT.		1/2 RT.		TOTAL	
-----	--	---------	--	-------	--

6	2	5	1	9	2	8	3	7	4	6	5	9	4	8	3	7	2	6	1	5	4	6	3	7
1	5	4	2	7	6	3	5	7	2	8	5	4	6	3	7	2	8	1	9	5	8	4	7	3
2	1	3	1	2	4	3	5	3	1	2	1	3	2	1	4	2	3	5	2	3	1	4	6	3

Sample

1	2	3	4	5	6	7	8	9
—	∩	□	└	U	○	∇	×	≡

10. DIGIT SYMBOL TEST

6. PICTURE ARRANGEMENT			
	T	ORDER	SC.
1 HOUSE (1')			
2 HOLD UP (1')			
3 ELEVATOR (1')			
4 FLIRT (2')			
5 TAXI (2')			
6 FISH (2')			

7. PICTURE COMPLETION	
1 NOSE	9 HAND
2 MUSTACHE	10 WATER
3 EAR	11 ARM—IMAGE
4 DIAMOND	12 TIE
5 LEG	13 BASE THREAD
6 TAIL	14 EYEBROW
7 STACKS	15 SHADOW
8 KNOB	

8. BLOCKS							
CARD	T	AC.	SC.	CARD	T	AC.	SC.
1 (75")				5 (150")			
2 (75")				6 (150")			
3 (75")				7 (195")			
4 (75")							

9. OBJECT ASSEMBLY			
OBJECTS	T	PLACE	SCORE
MAN (2')			
PROFILE (3')			
HAND (3')			

FOR CALCULATING DETERIORATION (see *Measurement of Adult Intelligence*, Chapter VI)

"HOLD" TESTS	Score	"DON'T HOLD" TESTS	Score
INFORMATION		DIGIT SPAN	
VOCABULARY		ARITHMETIC	
P.COMPLETION		BLOCK DESIGN	
OBJECT ASSEMBLY		DIGIT SYMBOL	
SUM		SUM	

% OF LOSS (Deterioration)

"HOLD" — "DON'T HOLD" ÷ "HOLD" =

CORRECTION — % LOSS

WECHSLER-BELLEVUE INTELLIGENCE SCALE

FOR ADOLESCENTS AND ADULTS

 RECORD
FORM

II

 NAME _____ AGE _____ EDUC. _____ DATE OF EXAM. _____ NO. _____
 OCCUP. _____ NAT. _____ BIRTHDATE _____ COLOR _____
 PLACE OF EXAM. _____ EXAM. BY _____ PREVIOUS EXAM. _____

Equivalent Weighted Score	TABLE OF WEIGHTED SCORES†											Equivalent Weighted Score
	RAW SCORE											
	Information	Comprehension	Digit Span	Arithmetic	Similarities	Vocabulary	Picture Arrangement	Picture Completion	Block Design	Object Assembly	Digit Symbol	
17		19-20	17	26-28	24	42-45	23-30		43-44		90-93	17
16	29-30	18	16	24-25	22-23	40-41	21-22		40-42	27	85-89	16
15	27-28	17		22-23	20-21	38-39	19-20	15	37-39	26	80-84	15
14	25-26	16	15	21	19	36-37	18		34-36	25	75-79	14
13	24	15	14	19-20	17-18	33-35	16-17	14	31-33	23-24	70-74	13
12	22-23	14		18	15-16	31-32	15	13	28-30	21-22	65-69	12
11	20-21	13	13	16-17	14	29-30	13-14	11-12	25-27	19-20	60-64	11
10	19	12	12	15	12-13	27-28	11-12	10	22-24	18	55-59	10
9	17-18	10-11	11	13-14	11	24-26	10	9	19-21	16-17	49-54	9
8	15-16	9		11-12	9-10	22-23	8-9	8	16-18	14-15	44-48	8
7	13-14	8	10	10	7-8	20-21	7	7	13-15	12-13	39-43	7
6	12	7	9	8-9	6	17-19	6	6	10-12	10-11	34-38	6
5	10-11	5-6		7	5	15-16	4-5	5	7-9	8-9	29-33	5
4	8-9	4	8	5-6	4	13-14	3	4	5-6	6-7	24-28	4
3	6-7	3	7	4	2-3	10-12	2		3-4	4-5	19-23	3
2	5	2	6	2-3	1	8-9		3	1-2	3	14-18	2
1	3-4	1		0-1		6-7	0	2	0	2	9-13	1
0	0-2	0	0-5			0-5		0-1		0	0-8	0

†Clinicians who wish to draw a "psychograph" on the above table may do so by connecting the appropriate raw scores; however, one must recognize the relative unreliability of these subtest scores when they are thus treated.

SUMMARY		
TEST	R.S.	WT.S.
INFORMATION		
COMPREHENSION		
DIGIT SPAN		
ARITHMETIC		
SIMILARITIES		
VOCABULARY		
VERBAL SCORE		
P. ARRANGEMENT		
P. COMPLETION		
BLOCK DESIGN		
(OBJECT ASSEMBLY)		
DIGIT SYMBOL		
PERFORMANCE SCORE		
WT.S.*		I.Q.
VERBAL SCALE _____		_____
PERFORM. SCALE _____		_____
FULL SCALE _____		_____
*PRORATED, IF NECESSARY (See Manual)		

EST ANALYSIS AND OBSERVATIONS

1. INFORMATION	Score
A EARS	
B FINGER	
C LEGS	
D MILK	
E STORE — SUGAR	
F PENNIES	
1 DAYS	
2 WATER — BOIL	
3 THINGS — DOZEN	
4 SEASONS — YEAR	
5 C.O.D.	
6 COLOR — RUBIES	
7 FOURTH — JULY	
8 CHILE	
9 POUNDS — TON	
10 ROMEO — JULIET	
11 SUN — SET	
12 STOMACH	
13 AMERICAN — MAN	
14 CAPITAL — GREECE	
15 OIL — FLOAT	
16 LABOR DAY	
17 TURPENTINE	
18 N. Y. — CHICAGO	
19 RAYON	
20 HARROW	
21 HIEROGLYPHIC	
22 IMPEACH	
23 LIEN	
24 GHENGIS KHAN	
25 PARADISE LOST	
26 BAROMETER	
27 PRIME NUMBER	

2. COMPREHENSION	Score
1 BOOK (WATCH)	
2 HOUSE — BRICK	
3 TRAIN	
4 CHARITY — BEGGAR	
5 FRIEND	
6 CRIMINALS	
7 CIVIL SERVICE	
8 CITIZEN	
9 COTTON — CLOTH	
10 PROMISE	

3. DIGITS FORWARD	DIGITS BACKWARD
(3) 3, 8, 6 6, 1, 2	(2) 2, 5 6, 3
(4) 3, 4, 1, 7 6, 1, 5, 8	(3) 5, 7, 4 2, 5, 9
(5) 8, 4, 2, 3, 9 5, 2, 1, 8, 6	(4) 7, 2, 9, 6 8, 4, 1, 3
(6) 3, 8, 9, 1, 7, 4 7, 9, 6, 4, 8, 3	(5) 4, 1, 6, 2, 7 9, 7, 8, 5, 2
(7) 5, 1, 7, 4, 2, 3, 8 9, 8, 5, 2, 1, 6, 3	(6) 1, 6, 5, 2, 9, 8 3, 6, 7, 1, 9, 4
(8) 1, 6, 4, 5, 9, 7, 6, 3 2, 9, 7, 6, 3, 1, 5, 4	(7) 8, 5, 9, 2, 3, 4, 2 4, 5, 7, 9, 2, 8, 1
(9) 5, 3, 8, 7, 1, 2, 4, 6, 9 4, 2, 6, 9, 1, 7, 8, 3, 5	(8) 6, 9, 1, 6, 3, 2, 5, 8 3, 1, 7, 9, 5, 4, 8, 2

5. SIMILARITIES	Score
1 PLUM — PEACH	
2 BEER — WINE	
3 CAT — MOUSE	
4 PIANO — VIOLIN	
5 PAPER — COAL	
6 POUND — YARD	
7 SCISSORS — COPPER PAN	
8 MOUNTAIN — LAKE	
9 FIRST — LAST	
10 SALT — WATER	
11 LIBERTY — JUSTICE	
12 49 — 121	

4. ARITHMETIC	T	RorW	SC.	T	RorW	SC.
1 (15")				6 (60")		
2 (15")				7 (60")		
3 (15")				8 (120")		
4 (30")				9 (120")		
5 (30")				10 (120")		

5A.

VOCABULARY

Score

1 BICYCLE

2 KNIFE

3 HAT

4 APPLE

5 DONKEY

6 BOX

7 BAD

8 UMBRELLA

9 BRAVE

10 NUISANCE

11 DIAMOND

12 LETTER

13 JOIN

14 FUR

15 CUSHION

16 NAIL

17 GAMBLE

18 SPADE

19 SHILLING

20 FABLE

21 SWORD

22 NONSENSE

23 HERO

24 NITROGLYCERINE

25 MICROSCOPE

26 ESPIONAGE

27 STANZA

28 SECLUDE

29 SPANGLE

30 BELFRY

31 RECEDE

32 AFFLICTION

33 BALLAST

34 CATACOMB

35 IMMINENT

36 MANTIS

37 HARA-KIRI

38 VESPER

39 ASEPTIC

40 CHATTEL

41 DILATORY

42 AMANUENSIS

43 MOIETY

44 FLOUT

45 TRADUCE

RT.

 $\frac{1}{2}$ RT.

TOTAL

9	1	5	8	7	6	9	7	8	2	4	8	3	5	6	7	1	9	4	3	6	2	7	9	3
1	8	2	9	7	6	2	5	4	7	3	6	8	5	9	4	1	6	8	9	3	7	5	1	4
3	1	5	4	2	7	4	6	9	2	5	8	4	7	6	1	8	7	5	4	8	6	9	4	3
2	1	4	6	3	5	2	1	3	4	2	1	3	1	2	3	1	4	2	6	3	1	2	5	1

SAMPLE

÷)	+	⊥	⌈	∇	(÷	⊥
1	2	3	4	5	6	7	8	9

10. DIGIT SYMBOL TEST

6. PICTURE ARRANGEMENT			
	T	ORDER	SC.
1 FARMER (45")			
2 BURGLAR (45")			
3 PICNIC (45")			
4 SLEEPER (75")			
5 GARDENER (60")			
6 KING (60")			
7 RAIN (75")			

7. PICTURE COMPLETION	
1 MOUTH	9 ANTENNAE
2 WHISKERS	10 MERCURY
3 DOOR HINGE	11 HATBAND
4 SCREW	12 SPOKES
5 SPUR	13 CLEFT
6 SPADE	14 SHADOW
7 BUTTONHOLES	15 EYEBROW
8 FIN	

8. BLOCKS							
CARD	T	AC.	SC.	CARD	T	AC.	SC.
DEM.				4 (75")			
1 (75")				5 (150")			
2 (75")				6 (150")			
3 (75")				7 (150")			

9. OBJECT ASSEMBLY			
OBJECT	T	PLACE	SCORE
HORSE (3')			
FACE (3')			
AUTO (3')			

FOR CALCULATING DETERIORATION (see *Measurement of Adult Intelligence*, Chapter VI)

"HOLD" TESTS	Score	"DON'T HOLD" TESTS	Score
INFORMATION		DIGIT SPAN	
VOCABULARY		ARITHMETIC	
P.COMPLETION		BLOCK DESIGN	
OBJECT ASSEMBLY		DIGIT SYMBOL	
SUM		SUM	

% OF LOSS (Deterioration)

$$\frac{\text{"HOLD"} - \text{"DON'T HOLD"}}{\text{"HOLD"}} =$$

$$\text{CORRECTION} \quad \% \text{ LOSS}$$

STANFORD ACHIEVEMENT TEST

By TRUMAN L. KELLEY, GILES M. RUCH, and LEWIS M. TERMAN

INTERMEDIATE BATTERY—PARTIAL FORM D

**Inter.
Partial
D**

Name.....Age.....Grade.....


Boy or girl..... Name of school.....

City.....State.....Date.....

TEST	SCORE	AGE EQUIVA- LENT	GRADE EQUIVA- LENT
1. Paragraph Meaning			
2. Word Meaning			
Average Reading			
3. Language Usage			
4. Arithmetic Reasoning			
5. Arithmetic Computation			
Average Arithmetic			
6. Spelling			
Total (Average)			

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PROFILE CHART: STANFORD ACHIEVEMENT TEST, INTERMEDIATE AND ADVANCED BATTERIES — PARTIAL

Test 1 READING Par.mean.	Test 2 LANG. Wd.mean	Test 3 ARITHMETIC USAGE	Test 4 SPELL- Reason	Test 5 ING Comp.	TOTAL SCORE ÷ 6	NORMS AGE EQUIV.	GRADE EQUIV.
100					100		
95					95		
90					90		
85					85		
80					80		
75					75		
70					70		
65					65		
60					60		
55					55		
50					50		
45					45		
40					40		
35					35		
30					30		
25					25		
20					20		

Test No.	Score
1	
2	
3	
4	
5	
6	
Total	

* Age and grade equivalents above this point are extrapolated values.

☛ This Profile Chart is a table of norms for the Intermediate and Advanced Examinations — Partial Batteries.
Comments:

DIRECTIONS. In the paragraphs below, each number shows where a word has been left out. Read each paragraph carefully, and wherever there is a number decide what word has been left out. Then write the missing word in the answer column at the right, as shown in the sample. Write **JUST ONE WORD** on each line. *Be sure to write each answer on the line that has the same number as the number of the missing word in the paragraph.*

SAMPLE.**Answer**

A-B Dick and Tom were playing ball in the field. Dick was throwing the —A— and —B— was trying to catch it.

A ----- ball -----
B -----

1-2 A mother bird was picking worms out of the ground. Instead of eating them herself, she carried them to her —1— to feed to her —2—.

1 -----
2 -----

3-4 It was a lovely sunny morning. Bobby and Betty were happy as they piled baskets of good things to eat into the car. —3— were going on a —4—.

3 -----
4 -----

5-6 Have you ever heard of a library without any books? There is such a library, owned by a motion-picture company, that contains nothing but hair. It has more than fifty thousand pieces — wigs, mustaches, and beards in styles of many years, past and present. The next time you see your favorite brunette actress appear on the screen as a blonde, either she may have had her hair bleached, or, more likely, she is wearing a —5— from this —6—.

5 -----
6 -----

7-8-9 When traveling in China, I came upon an old fort with stone and earth walls that were twenty-four feet high and twelve feet thick. The —7— were therefore twice as —8— as they were —9—.

7 -----
8 -----
9 -----

10-11-12 One of the most famous explorers of Africa was a missionary sent from England named Livingstone. He traced the course of important rivers, discovered great lakes, and tried to find the parts of —10— that were best suited to white men. He performed his missionary work as he traveled, establishing missions and preaching the gospel of Christianity. Finally his arduous labors ruined his health, and he —11— in Africa. His body was taken back to his home in —12— for burial, and he is honored as one of the world's greatest explorers.

10 -----
11 -----
12 -----

Go right on to the next page.

13-14 Achilles was a character in the old Greek stories. The story goes that when Achilles was an infant his mother, wishing to protect him, dipped him in the river Styx, the water of which rendered his body invulnerable. The only exception was the heel by which she held him, which did not get wet. However, after many heroic deeds through which he came unharmed, —13— was finally killed by a 13-----
poisoned arrow shot by his rival, Paris, which struck him in the —14—, 14-----
his only vulnerable spot.

15-16 In this country we seldom hear of duels today, but in colonial days, and for some time after, the duel played a considerable part in American political and social life. Many great names have been connected with the story of the duels in this —15—, including one President of the 15-----
United States. The most famous of all American —16— was the tragic 16-----
meeting of Hamilton and Burr.

17-18 Fruits which are not too ripe contain pectin, the most important substance in jelly making. Fruit juices with the proper amounts of 17-----
fruit acids, pectin, and sugar will always jell. In overripe fruit, the —17— content is too low and the juice will not —18—. 18-----

19-20-21 In olden days men made their own pens from the quills of feathers. It required considerable skill to cut a pen properly so as to suit one's individual taste in writing. Students were always on the 19-----
lookout for good goose, swan, turkey, or other bird feathers. Goose quills made the most satisfactory —19— for general —20—, but school- 20-----
masters liked pens made from the —21— of swan feathers because they fitted best behind the ear. 21-----

22-23-24 Samuel Weller is a character in Dickens's well-known book, *Pickwick Papers*. He was a servant to Mr. Pickwick and was devoted to 22-----
his master. He is a very entertaining character, combining wit, simplicity, humor, and fidelity. When *Pickwick Papers* came out, people 23-----
were greatly amused by Mr. Pickwick and —22— —23— and were eager to read other books written by —24—. 24-----

25-26 In speaking of gold, the term "carat" is used to indicate the proportion of gold in a given mass. A carat is one twenty-fourth of the whole mass. Thus, a fourteen-carat ring is one with fourteen parts of pure gold and ten parts of some other metal, usually copper. A 25-----
twenty-four-carat watch chain is pure —25—. A bracelet that is half gold and half copper would be called a —26—-carat gold bracelet. 26-----

27-28-29 One of the paradoxical developments of the machine age is increased leisure-time interest in handicrafts. Such activities as weaving, woodworking, and knitting are carried on by large numbers of persons. By decreasing the amount of time necessary to perform many kinds of labor, the widespread use of —27— has increased the desire of people to do work with their —28— in their —29— time.

30-31-32 There were three great philosophers and leaders of thought in ancient Greece who are still revered by students everywhere. Socrates, the first of these, was put to death because of his teachings. Plato, a young student of Socrates, took up the latter's work after his death and taught the people what he had learned from his great instructor. After Plato came Aristotle, who, though he belonged to a different school of thought from that of —30— and —31—, was an equally great —32— and teacher.

33-34-35 We have two ready means of communication with others, speech and writing. But it has not always been easy to make one's self understood wherever one went. For this reason sign language was developed. The Indians whose various tribes spoke different dialects perfected —33— language to a high degree. Today a standard sign language has also been developed for the use of those unfortunate persons who by birth or accident cannot —34— or —35—.

36-37-38 "Blue stocking" means, figuratively, a female pedant, or one who emphasizes learning unduly. It derives its name from literary societies of the seventeenth and eighteenth centuries whose members wore —36— —37— as a distinguishing mark. In present-day usage the term is applied to women who make a display of their —38—.

39-40 Chile is a country of great versatility and wonderful natural gifts. In the mountains are rich mines, and in the lower regions the soil is fertile and productive. In the sea, rivers, and lakes all kinds of fish are to be found. This explains why —39— is able to satisfy the most varied —40—.

41-42-43 Hercules is one of the great heroes of mythology. He performed many wonderful deeds and feats of strength, but at last he was fatally poisoned by the blood of the Centaur. As his body lay on his funeral pyre with the —41— rising about him, Apollo, sent by the gods, came down from the heavens and took —42— up to Olympus, the home of the —43—.

44-45 Dryden tells us that "Solitude is as needful to the imagination as society is wholesome for the character." By this he means that the art of thinking and contemplation is developed by —44—, but that good character requires that one live in the —45— of his fellow men.

End of Test 1. Look over your work.

NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Equated score	27	28	29	30	32	33	35	36	37	39	40	42	43	44	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	72	73	75	77	78	80	81	8

DIRECTIONS. In each exercise one of the five numbered words will complete the sentence correctly. Note the number of this word. Then mark the answer space at the right which is numbered the same as the word you have selected.

SAMPLES.

A A rose is a —	1 box	2 flower	3 home	4 month	5 river	.....	A	1	2	3	4	5
B A roof is found on a —	6 book	7 person	8 rock	9 house	10 word	.....	B	6	7	8	9	10
C Bread is something to —	1 catch	2 drink	3 throw	4 wear	5 eat	.....	C	1	2	3	4	5

1 An idea is a —	1 sound	2 sight	3 picture	4 laugh	5 thought	.....	1	1	2	3	4	5
2 To shine is to be —	6 cool	7 bright	8 dry	9 proud	10 busy	.....	2	6	7	8	9	10
3 A sawmill produces —	1 wire	2 buttons	3 boots	4 needles	5 lumber	.....	3	1	2	3	4	5
4 To offer is to try to —	6 love	7 find	8 change	9 give	10 sing	.....	4	6	7	8	9	10
5 A vessel is a —	1 bell	2 village	3 boat	4 wave	5 bridge	.....	5	1	2	3	4	5
6 To sparkle means to —	6 shine	7 shake	8 smile	9 enjoy	10 strike	.....	6	6	7	8	9	10
7 To pronounce is to —	1 sail	2 watch	3 show	4 stand	5 speak	.....	7	1	2	3	4	5
8 A listener is a —	6 buyer	7 giver	8 cardinal	9 treasurer	10 hearer	.....	8	6	7	8	9	10
9 To vanish is to —	1 disappear	2 punish	3 witness	4 examine	5 request	.....	9	1	2	3	4	5

6→

10 To be content is to be —	6 satisfied	7 angry	8 awake	9 faithful	10 bold	.....	10	6	7	8	9	10
11 To furnish means to —	1 finish	2 guard	3 supply	4 prove	5 waste	.....	11	1	2	3	4	5
12 To slumber is to —	6 answer	7 work	8 sleep	9 measure	10 rain	.....	12	6	7	8	9	10
13 Clever means —	1 monstrous	2 lonely	3 delicious	4 skillful	5 thriving	.....	13	1	2	3	4	5
14 To purchase is to —	6 keep	7 buy	8 make	9 play	10 point	.....	14	6	7	8	9	10
15 To be courageous is to be —	1 clean	2 wrong	3 brave	4 careful	5 strange	.....	15	1	2	3	4	5
16 To stare is to —	6 gaze	7 crush	8 spy	9 tread	10 glance	.....	16	6	7	8	9	10
17 A treaty is an —	1 interval	2 idiot	3 agreement	4 experiment	5 implement	.....	17	1	2	3	4	5
18 To label is to —	6 carry	7 lower	8 mark	9 hold	10 supply	.....	18	6	7	8	9	10
19 To be correct is to be —	1 graded	2 proper	3 different	4 famous	5 forward	.....	19	1	2	3	4	5
20 Expert means —	6 haughty	7 harsh	8 reasonable	9 virtuous	10 skillful	.....	20	6	7	8	9	10
21 To instruct is to —	1 inform	2 admit	3 forbid	4 punish	5 assure	.....	21	1	2	3	4	5
22 A sledge is a —	6 garment	7 saddle	8 frame	9 support	10 hammer	.....	22	6	7	8	9	10
23 To have sympathy for is to —	1 rejoice	2 praise	3 refuse	4 pity	5 shame	.....	23	1	2	3	4	5

Go right on to the next page.

	6	7	8	9	10
²⁴ Gloomy means — 6 heroic 7 fragrant 8 gorgeous 9 dismal 10 majestic..... 24	1	2	3	4	5
²⁵ Disobedient means — 1 clumsy 2 critical 3 credulous 4 grotesque 5 unruly 25	6	7	8	9	10
²⁶ Intelligence means — 6 praise 7 justice 8 anger 9 liberty 10 wisdom..... 26	1	2	3	4	5
²⁷ Violence often causes — 1 wisdom 2 respect 3 justice 4 knowledge 5 harm..... 27	6	7	8	9	10
²⁸ Imperial affairs concern — 6 nations 7 cities 8 banks 9 stars 10 streams... 28	1	2	3	4	5
²⁹ To escort is to — 1 review 2 accompany 3 engage 4 approve 5 rejoice..... 29	6	7	8	9	10
³⁰ A vagabond is a — 6 scholar 7 miracle 8 fable 9 pistol 10 tramp..... 30	1	2	3	4	5
³¹ An abode is a place where one — 1 earns 2 dwells 3 bakes 4 parks 5 swims 31	6	7	8	9	10
³² To magnify is to — 6 inspire 7 decrease 8 insult 9 enlarge 10 ripen..... 32	1	2	3	4	5
³³ A stag is a — 1 deer 2 squirrel 3 colt 4 snake 5 dove..... 33	6	7	8	9	10
³⁴ A communication is a — 6 palace 7 message 8 companion 9 struggle 10 memory 34	1	2	3	4	5
³⁵ A summit is a — 1 loop 2 peak 3 tract 4 vault 5 patron..... 35	6	7	8	9	10
³⁶ A lens is made of — 6 iron 7 glass 8 wood 9 wheat 10 felt..... 36	1	2	3	4	5
³⁷ To bleach is to — 1 harden 2 darken 3 lighten 4 soften 5 sharpen..... 37					
7 →					
³⁸ Behavior refers to — 6 courage 7 conduct 8 appearance 9 effort 10 features 38	1	2	3	4	5
³⁹ Commerce means — 1 weather 2 forests 3 trade 4 speed 5 crowds..... 39	6	7	8	9	10
⁴⁰ To compose is to — 6 construct 7 condemn 8 propose 9 overcome 10 confess... 40	1	2	3	4	5
⁴¹ A situation refers to a — 1 rival 2 majority 3 capture 4 position 5 strain 41	6	7	8	9	10
⁴² Abashed means — 6 amiable 7 capacious 8 embarrassed 9 unreasonable 10 woeful 42	1	2	3	4	5
⁴³ A counselor is a — 1 beggar 2 carpenter 3 lawyer 4 dragon 5 chariot..... 43	6	7	8	9	10
⁴⁴ Renowned means — 6 famous 7 natural 8 strange 9 quiet 10 forward..... 44	1	2	3	4	5
⁴⁵ To interpret is to — 1 accomplish 2 preserve 3 influence 4 explain 5 vote... 45	6	7	8	9	10
⁴⁶ Rapture is — 6 trouble 7 value 8 joy 9 difference 10 business..... 46	1	2	3	4	5
⁴⁷ Filthy means — 1 capable 2 violent 3 fatal 4 foul 5 fearful..... 47	6	7	8	9	10
⁴⁸ Minimum means the — 6 largest 7 least 8 most 9 newest 10 oldest..... 48	1	2	3	4	5
⁴⁹ To sever is to — 1 cut 2 hurt 3 strike 4 unite 5 supply..... 49	6	7	8	9	10
⁵⁰ Lithe means — 6 eloquent 7 massive 8 somber 9 flexible 10 tremulous 50					

End of Test 2. Look over your work.

NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
Equated score	21	22	24	25	26	27	28	29	31	32	33	34	35	36	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	65	66	67	68	69	70	71	72	74	75	76	77

DIRECTIONS. Study the samples below carefully.

SAMPLES.

- A Apples ¹ is good..... A ² are
- B He ³ told me..... B ⁴ telled

- 1 I ¹ ain't got no time to play..... 1 ² have
- 2 ³ The soldiers they marched along..... 2 ⁴ The soldiers
- 3 I borrowed the money ⁵ from Tom..... 3 ⁶ off of
- 4 ¹ Me and Sally had a party..... 4 ² Sally and I
- 5 I ³ ain't dressed yet..... 5 ⁴ am not
- 6 ⁵ Them cookies are good with milk..... 6 ⁶ Those
- 7 ¹ That apple tree is a young one..... 7 ² That there
- 8 The horses ³ are tired..... 8 ⁴ is
- 9 Alice is ⁵ at her uncle's house..... 9 ⁶ to
- 10 She ¹ doesn't know any better..... 10 ² don't

8^a→

- 11 Don't come ³ unless I send for you..... 11 ⁴ without
- 12 Isn't ⁵ anybody at home?..... 12 ⁶ nobody
- 13 Father ¹ give me a pencil last week..... 13 ² gave
- 14 ³ Yourself and your sisters should go..... 14 ⁴ You
- 15 ⁵ While I am ready, I won't go..... 15 ⁶ Although
- 16 The man ¹ swung from the rope..... 16 ² swang
- 17 You have ³ gived me much pleasure..... 17 ⁴ given
- 18 Who ⁵ drunk my milk?..... 18 ⁶ drank
- 19 The fruit ¹ growed on this tree..... 19 ² grew
- 20 Where is she ³ going?..... 20 ⁴ going to?
- 21 Will you ⁵ learn me to cook?..... 21 ⁶ teach
- 22 Tom is ¹ more happier than Fred..... 22 ² happier
- 23 We ³ were going downtown..... 23 ⁴ was
- 24 ⁵ Leave me have the first turn..... 24 ⁶ Let

Go right on to Number 25.

- 25 They ¹ all unanimously agreed to go..... 25 ² unanimously
- 26 Who has ³ taken my ball?..... 26 ⁴ took
- 27 Who ⁵ seen the boys fighting?..... 27 ⁶ saw
- 28 Sue sews very ¹ well..... 28 ² good.
- 29 The paper is ³ nowhere about..... 29 ⁴ nowheres
- 30 Nothing ⁵ ever disturbs me..... 30 ⁶ never
- 31 I had hardly come ¹ than I had to go..... 31 ² when
- 32 We don't ³ remember of finding a ball..... 32 ⁴ remember
- 33 The tribe is ⁵ kind of warlike..... 33 ⁶ rather
- 34 I looked at him and ¹ said, "Come in."..... 34 ² says,
- 35 Yes, I ³ did it..... 35 ⁴ done
- 36 Jane asked ⁵ was Sarah coming..... 36 ⁶ if Sarah was
- 37 You ¹ must have been asleep..... 37 ² must of
- 38 They have all ³ went home..... 38 ⁴ gone

8^b→

- 39 A book was lying ⁵ onto the table..... 39 ⁶ on
- 40 The river has ¹ frozen over..... 40 ² froze
- 41 Sarah ³ used to could dance the hornpipe..... 41 ⁴ once could
- 42 I can do that ⁵ easy..... 42 ⁶ easily.
- 43 It ¹ begun to rain hard..... 43 ² began
- 44 They made the boat ³ themselves..... 44 ⁴ theirselves.
- 45 I didn't know that, ⁵ either..... 45 ⁶ neither.
- 46 Who has ¹ saw my skates?..... 46 ² seen
- 47 He can't come ³ unless he gets a free ticket..... 47 ⁴ except
- 48 He ⁵ could scarcely do it..... 48 ⁶ couldn't
- 49 I have often ¹ eaten oranges..... 49 ² ate
- 50 The trio ³ sang the first number..... 50 ⁴ sung
- 51 That was ⁵ all the farther he would walk..... 51 ⁶ as far as
- 52 This is ¹ a orange..... 52 ² an

Go right on to the next page.

53	They caught up with Ralph and ³ we. ₄ us.	53	3	4
54	I ⁵ am ₆ have been in our club four years already.	54	5	6
55	You must have felt ¹ uncomfortable. ₂ uncomfortably.	55	1	2
56	I have often ³ spoken ₄ spoke of that.	56	3	4
57	The man gave ⁵ us ₆ we boys some fish.	57	5	6
58	She felt his absence ¹ deep. ₂ deeply.	58	1	2
59	Has the factory whistle ³ blown ₄ blew yet?	59	3	4
60	I ⁵ can hardly ₆ can't hardly hear you.	60	5	6
61	He is ¹ almost the best player I ₂ the best player I almost ever knew.	61	1	2
62	³ Her ₄ She and I will be partners.	62	3	4
63	You look ⁵ sort of ₆ rather discouraged.	63	5	6
64	She sang ¹ beautiful. ₂ beautifully.	64	1	2
65	This is for ³ whoever ₄ whomever gets here first.	65	3	4
66	The house is ⁵ most ₆ almost finished.	66	5	6

9^a→

67	Edison ¹ discovered ₂ invented the phonograph.	67	1	2
68	Mother and I ³ wasn't ₄ weren't at home.	68	3	4
69	I ⁵ sat ₆ set there about an hour.	69	5	6
70	The vase had ¹ broke ₂ broken when it fell.	70	1	2
71	This is the man ³ which ₄ who helped me.	71	3	4
72	The river ⁵ rose ₆ raised four inches.	72	5	6
73	He played ¹ badly ₂ bad yesterday.	73	1	2
74	³ But don't forget, ₄ Don't forget, however, to write.	74	3	4
75	The horse ⁵ busted ₆ burst a blood vessel.	75	5	6
76	It was ¹ they ₂ them who started the game.	76	1	2
77	It ³ looks like either ₄ either looks like Mary or Kate.	77	3	4

Go right on to Number 78.

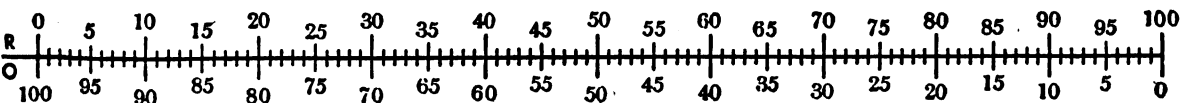
78	Is it ⁵ you're ₆ your turn to pitch?	78	5	6
79	Betty and Jane ¹ is ₂ are coming.	79	1	2
80	James is the ³ carefulest ₄ most careful boy here.	80	3	4
81	It is neither true ⁵ nor ₆ or false.	81	5	6
82	It must be ¹ someplace. ₂ somewhere.	82	1	2
83	I read ³ that ₄ where frost is predicted.	83	3	4
84	Their house is ⁵ some ₆ somewhat bigger than ours.	84	5	6
85	Please ¹ bring ₂ take that over there to John.	85	1	2
86	A tall and a short boy ³ is ₄ are required.	86	3	4
87	You ⁵ ought ₆ had ought to save money.	87	5	6
88	¹ We ₂ Us children are sleepy.	88	1	2
89	Watching the deer, ³ their path was lost. ₄ they lost their path.	89	3	4
90	The cat is ⁵ lying ₆ laying on the rug.	90	5	6
91	They had ¹ come ₂ came on ahead.	91	1	2

9^b→

92	We don't know ³ as ₄ that he will come.	92	3	4
93	The boys brought ⁵ there ₆ their own blankets.	93	5	6
94	The sun has ¹ rose ₂ risen already.	94	1	2
95	They were ³ real ₄ really anxious to go.	95	3	4
96	A group of ⁵ we ₆ us children will sing.	96	5	6
97	I ¹ expect ₂ believe he must have been there.	97	1	2
98	He is the tallest ³ boy ₄ of any other boys here.	98	3	4
99	We ⁵ can ₆ can't get in only after school.	99	5	6
100	To whom did you ¹ write? ₂ write to?	100	1	2

End of Test 3. Look over your work.

No. right ()	× 2 ()
No. omitted ()	
Sum ()	
Subtract 100	
Difference ()	



DIRECTIONS. Find the answers to these problems as quickly as you can. Write the answers on the dotted lines. Use the margins to figure on.

- | | Answer |
|------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1 Mother paid 9 cents for milk and 7 cents for bread. How many cents in all did she pay for these two things? | ----- |
| 2 Betty has 7 dolls, Florence has 8 dolls, and Alice has 6 dolls. How many dolls do they have all together? | ----- |
| 3 Ann has 17 paper dolls and Mary has 9 paper dolls. Ann has how many more than Mary? | ----- |
| 4 David bought some jacks. He paid 2 nickels and 6 pennies for them. How many cents did the jacks cost? | ----- |
| 5 Bill has 8 apples. Mary has three times as many. How many apples has Mary? | ----- |
| 6 A pony cost 98 dollars and a calf cost 62 dollars. The calf cost how many dollars less than the pony? | ----- |
| 7 I saved 136 pennies. Father gave me 34 pennies. I earned 118 more. How many pennies did I have then? | ----- |
| 8 A teacher placed the 128 pupils on the playground in two equal groups for a game. How many did she put in each group? | ----- |
| 9 Mrs. Black's cupboard has 6 shelves. Each shelf will hold 27 jars of fruit. How many jars of fruit will all 6 shelves hold? | ----- |
| 10 Donald picked 6 quarts of strawberries. He gave his mother 1 gallon and sold the rest. How many quarts did he sell? | ----- |
| 11 Yesterday Ann saw 9 robins and 4 bluebirds. Today she saw 7 robins and 8 sparrows. How many robins did she see in the two days? | ----- |

Go right on to Problem 12.

- | | Answer |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 12 Father divided some oranges equally among 3 children. He gave each child 12 oranges. How many oranges did he divide among the 3 children? | ----- |
| 13 Four families agreed to share the cost of a picnic equally. The cost was \$3.84. How many cents was each family's share? | ----- |
| 14 The 6 boys of the Stamp Club have 432 stamps in all. How many stamps do these 6 boys have on the average? | ----- |
| 15 Last year a farm produced 1523 bushels of wheat. This year it produced 1687 bushels. The difference for the two years was how many bushels? | ----- |
| 16 Mr. Ellis earns \$225 a month. He pays $\frac{1}{3}$ of this money for rent each month. How many dollars per month is his rent? | ----- |
| 17 When candy bars are 3 for 10¢, how many can be bought for 40¢? | ----- |
| 18 Joe spends 14¢ a day and his brother Tom spends 22¢ a day for lunches. How many more cents does Tom spend than Joe for lunches in a school week of 5 days? | ----- |
| 19 There are 56 pounds of rye in a bushel. How many bushels are there in 3584 pounds of rye? | ----- |
| 20 A train left Ashland at 8:45 A.M. and arrived at Newton at 11:45 A.M. How many hours did the trip take? | ----- |
| 21 You know the number of miles per hour that an airplane travels. You know how many hours a trip takes. To find the number of miles traveled, would you <i>add</i> , <i>subtract</i> , <i>multiply</i> , or <i>divide</i> ? | ----- |

Go right on to the next page.

Answer

Answer

22 Mrs. White used $\frac{1}{2}$ teaspoonful of nutmeg and $\frac{2}{3}$ teaspoonful of cinnamon in making a cake. How many teaspoonfuls of both kinds of spice did she use? -----

23 Mrs. Kay bought a radio for \$75. She paid \$45 in cash and agreed to pay the rest in 6 equal monthly payments. How much will her monthly payments be? -----

24 Andy had 4 yd. of canvas. He used $2\frac{1}{4}$ yd. to make a sail. How many yards did he have left? -----

25 Fred sawed a board into 8 pieces, each $1\frac{3}{4}$ ft. long. How many feet long was the board at first, ignoring waste in sawing? -----

26 Eight oranges are what fraction of a dozen, in simplest form? -----

27 The distances a motorist drove during each hour of a 7-hour trip were: 43 mi., 37 mi., 34 mi., 41 mi., 42 mi., 35 mi., and 41 mi. How many miles an hour did he average? -----

28 At the rate of $\frac{3}{4}$ mile in 15 minutes, how many miles will a man walk in an hour? -----

29 How many cubic feet of earth must be removed in digging a cellar $10' \times 20' \times 30'$? -----

30 Two cities are 175 miles apart. How many inches apart would these cities be on a map drawn to the scale: $1'' = 100$ mi.? -----

31 The girls in Ellen's class made 12 pounds of candy for the school sale. The costs were: sugar, 75¢; chocolate, 10¢; milk, 10¢; and butter, 48¢. They sold the candy for 30¢ a pound. How much money did they make after paying all expenses? -----

Go right on to Problem 32.

32 Paul feeds his chickens $\frac{3}{8}$ pk. of grain at each feeding. He has $3\frac{3}{4}$ pk. of grain left. How many feedings has he left? -----

33 Mr. Jackson has \$435.75 in his savings account. He says this is $\frac{1}{6}$ of his total savings. How much are his total savings? -----

34 It snowed steadily from 11:25 P.M. until 6:35 the next morning. How many hours did it snow that night? -----

35 A Model XX-R radio sells for \$75. The cost is .6 of the selling price. What is the cost? -----

36 A rectangular lot is $30' \times 60'$. It is all in lawn except a rectangular pool $5' \times 10'$. How many square feet are in lawn? -----

37 Eight feet of a 32-foot pole are underground. Compare the underground portion with the total length of the pole as a decimal fraction. -----

38 The area of a 5-ft. square is how many square feet more than the area of a square containing 5 square feet? -----

39 A principal said that .64, or 320, of the pupils in his school have savings accounts. How many pupils are in the school? -----

40 One year a man earned a total of \$1869.45. To the nearest cent, what was his average earning per month? -----

End of Test 4. Look over your work.

NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Equivalent score	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	

DIRECTIONS. Look at Example 1 below. It tells you to add 3 and 2. 3 and 2 are 5; so 5 is written as the answer. The answer 5 to Example 1 has also been written in the space numbered 1 in the column marked *Answer* at the right. Now look at Example 2. It tells you to subtract 1 from 4. The answer is 3; so the 3 is also written in the space numbered 2 in the column marked *Answer* at the right.

Now do the other examples in the same way. Begin with Example 3 and work as quickly as you can without making mistakes. Look carefully at each example to see what it tells you to do.

Be sure to copy your answers in the column at the right.

1	Add	2	Subtract	3	Add	4		5		Answer
	$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$		$\begin{array}{r} 4 \\ 1 \\ \hline 3 \end{array}$		$\begin{array}{r} 2 \\ 5 \\ \hline \end{array}$		$3 \times 9 =$	$3 \overline{)216}$		1 <u>5</u>
										2 <u>3</u>
										3 _____
										4 _____
										5 _____
6	Multiply	7	Subtract	8	Subtract	9		10	Add	
	$\begin{array}{r} 306 \\ \underline{2} \end{array}$		$\begin{array}{r} 154 \\ \underline{63} \end{array}$		$\begin{array}{r} 5 \\ \underline{3} \end{array}$		$18 \div 2 =$		$\begin{array}{r} 28 \\ 77 \\ 9 \\ \hline 86 \end{array}$	6 _____
										7 _____
										8 _____
										9 _____
										10 _____
11	Subtract	12	Add	13	Multiply	14	Add	15	Subtract	
	$\begin{array}{r} 547 \\ \underline{285} \end{array}$		$\begin{array}{r} 1689 \\ 5314 \\ 3777 \\ \hline 4288 \end{array}$		$\begin{array}{r} 9093 \\ \underline{8} \end{array}$		$\begin{array}{r} 289 \\ 188 \\ 396 \\ \hline 78 \end{array}$		$\begin{array}{r} 937146 \\ \hline 419087 \end{array}$	11 _____
										12 _____
										13 _____
										14 _____
										15 _____
16	$7 \overline{)4921}$	17	$\$ 4 \overline{) \$38.16}$	18	Multiply	19	$24 \overline{)96}$	20	$7 \overline{)356}$	16 _____
					$\begin{array}{r} 398 \\ \underline{400} \end{array}$					17 <u>\$</u>
										18 _____
										19 _____
										20 _____

Go right on to Example 21 on the next page.

TEST 5. ARITHMETIC COMPUTATION (Cont'd)

13

21	22	23	24	Answer
$\begin{array}{r} 5 \overline{)3504} \end{array}$	<p>Multiply</p> $\begin{array}{r} 582 \\ 206 \\ \hline \end{array}$	<p>Add</p> $\begin{array}{r} 1\frac{1}{2} \\ 1\frac{1}{2} \\ \hline \end{array}$	$\frac{6}{8} = \frac{3}{4}$	21 _____
				22 _____
				23 _____
				24 _____
25	26	27	28	
$\begin{array}{r} 45 \overline{)2385} \end{array}$	<p>Multiply</p> $\begin{array}{r} 679 \\ 250 \\ \hline \end{array}$	<p>Multiply</p> $\begin{array}{r} \$4.73 \\ 84 \\ \hline \end{array}$	$\frac{3}{4} \times \frac{1}{5} =$	25 _____
				26 _____
				27 \$ _____
				28 _____
29	30	31	32	
<p>Subtract</p> $\begin{array}{r} \frac{1}{2} \\ \frac{1}{10} \\ \hline \end{array}$	<p>Subtract</p> $\begin{array}{r} 7 \\ 6\frac{5}{8} \\ \hline \end{array}$	<p>Subtract</p> $\begin{array}{r} 5283.3862 \\ 741.6165 \\ \hline \end{array}$	<p>Add</p> $\begin{array}{r} 4\frac{2}{3} \\ 5\frac{3}{5} \\ \hline \end{array}$	29 _____
				30 _____
				31 _____
				32 _____
33	34	35	36	
$\begin{array}{r} 62 \overline{)40796} \end{array}$	<p>Add</p> $\begin{array}{r} 532.945 \\ 600.827 \\ 82.961 \\ 1.788 \\ 142.603 \\ \hline \end{array}$	<p>Subtract</p> $\begin{array}{r} 8\frac{2}{3} \\ 3\frac{3}{5} \\ \hline \end{array}$	$\begin{array}{r} 28 \overline{)2576} \end{array}$	33 _____
				34 _____
				35 _____
				36 _____
37	38	39	40	41
$\frac{1}{6} \times \frac{4}{5} =$	<p>Multiply</p> $\begin{array}{r} 2.478 \\ 100 \\ \hline \end{array}$	$4 \div \frac{2}{5} =$	<p>Add</p> $\begin{array}{r} 4\frac{1}{3} \\ 1\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 8 \overline{)0.72} \end{array}$
				37 _____
				38 _____
				39 _____
				40 _____
				41 _____

Turn the page and go right on to Example 42.

42

$$\begin{array}{r} 72 \overline{)30965} \end{array}$$

43

$$2\frac{4}{5} \times 1\frac{7}{8} =$$

44

Find the average

$$\begin{array}{r} 15 \text{ ft.} \\ 9 \text{ ft.} \\ 26 \text{ ft.} \\ \hline 14 \text{ ft.} \end{array}$$

45

$$\begin{array}{r} 13 \overline{)24701} \end{array}$$

Answer

42 -----

43 -----

44 ----- ft.

45 -----

46

$$\frac{1}{4} \div 3 =$$

47

Add

$$\begin{array}{r} 4\frac{1}{4} \\ 27\frac{3}{4} \\ \hline 8\frac{5}{6} \end{array}$$

48

$$\frac{3}{5} \div 2\frac{1}{10} =$$

49

$$\frac{9}{10} \times 4\frac{7}{12} =$$

46 -----

47 -----

48 -----

49 -----

50

Multiply

$$\begin{array}{r} .048 \\ .12 \\ \hline \end{array}$$

51

$$282 \overline{)154254}$$

52

$$2\frac{1}{16} \div 1\frac{1}{10} =$$

50 -----

51 -----

52 -----

53

Add

$$\begin{array}{r} 11 \text{ lb. } 10 \text{ oz.} \\ 9 \text{ lb. } 6 \text{ oz.} \\ 8 \text{ lb. } 4 \text{ oz.} \\ \hline \end{array}$$

54

$$.80 \overline{)4}$$

55

Subtract

$$\begin{array}{r} 6 \text{ yr. } 3 \text{ mo.} \\ 2 \text{ yr. } 9 \text{ mo.} \\ \hline \end{array}$$

53 ----- lb. oz.

54 -----

55 ----- yr. mo.

56

$$.008 \overline{)32}$$

57

Subtract

$$\begin{array}{r} 5 \frac{3}{10} \\ 2 \frac{7}{15} \\ \hline \end{array}$$

58

$$.36 \overline{)6.3}$$

Answer

56 -----

57 -----

58 -----

59 What author died a year or two later than Whittier, according to Figure 1?

59 -----

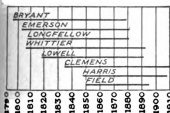


FIG. 1

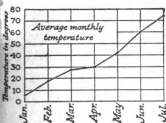


FIG. 2

60 During what month was the average temperature one half that of June, according to Figure 2?

60 -----

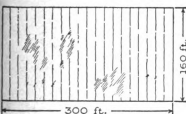


FIG. 3

61 What is the area of the football field in Figure 3 in square feet?

61 ----- sq. ft.



FIG. 4

62 What is the volume in cubic inches of the shipping box shown in Figure 4?

62 ----- cu. in.

End of Test 5. Look over your work.

NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Equated score	25	26	27	28	29	30	31	32	33	34	35	36	38	39	40	41	42	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70

4	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
60	67	68	70	71	72	73	75	76	77	78	80	81	82	83	85	88

1	26
2	27
3	28
4	29
5	30
6	31
7	32
8	33
9	34
10	35
11	36
12	37
13	38
14	39
15	40
16	41
17	42
18	43
19	44
20	45
21	46
22	47
23	48
24	49
25	50

Grade 4	NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	Equated score	20	20	21	21	22	22	23	24	25	25	26	26	27	28	28	29	30	30	31	32	32	33	34	34	35	36	36	37	38	39	40	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	57	58	60	63	65

Grade 5	NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	Equated score	20	21	22	23	24	25	26	27	28	29	31	32	33	34	35	36	37	37	38	39	40	41	41	42	43	44	45	46	46	47	48	49	50	51	52	53	54	55	56	57	58	59	61	62	63	65	67	68	71	74	77

Grade 6	NUMBER RIGHT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	Equated score	20	20	21	22	23	24	25	26	27	28	29	30	40	41	42	43	44	44	45	46	47	47	48	49	50	50	51	52	53	53	54	55	56	57	58	58	59	60	61	62	63	64	65	67	68	69	71	72	74	77	79

APPENDIX E

MOONEY PROBLEM CHECK LIST

1950
REVISION

ROSS L. MOONEY
Bureau of Educational Research
Ohio State University

J JUNIOR
HIGH
SCHOOL
FORM

Age..... Date of birth..... Boy..... Girl.....

Grade in Name of
school..... school.....

Name of the person to whom
you are to turn in this paper.....

Your name Date.....

DIRECTIONS

This is a list of some of the problems of boys and girls. You are to pick out the problems which are troubling you.

Read the list slowly, and as you come to a problem which is troubling you, draw a line under it. For example, if you are often bothered by headaches, you would draw a line under the first item, like this, "1. Often have headaches."

When you have finished reading through the whole list and marking the problems which are troubling you, please answer the questions on Page 5.

HPD

S

HF

MWF

BG

PG

SC

TOTAL

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The Psychological Corporation

522 Fifth Avenue, New York, N. Y.

50-124T
Printed in U.S.A.

DIRECTIONS: Read the list slowly, and as you come to a problem which troubles you, draw a line under it.

-
- | | |
|----------------------------------------------------|--------------------------------------------------|
| 1. Often have headaches | 36. Too short for my age |
| 2. Don't get enough sleep | 37. Too tall for my age |
| 3. Have trouble with my teeth | 38. Having poor posture |
| 4. Not as healthy as I should be | 39. Poor complexion or skin trouble |
| 5. Not getting outdoors enough | 40. Not good looking |
| 6. Getting low grades in school | 41. Afraid of failing in school work |
| 7. Afraid of tests | 42. Trouble with arithmetic |
| 8. Being a grade behind in school | 43. Trouble with spelling or grammar |
| 9. Don't like to study | 44. Slow in reading |
| 10. Not interested in books | 45. Trouble with writing |
| 11. Being an only child | 46. Sickness at home |
| 12. Not living with my parents | 47. Death in the family |
| 13. Worried about someone in the family | 48. Mother or father not living |
| 14. Parents working too hard | 49. Parents separated or divorced |
| 15. Never having any fun with mother or dad | 50. Parents not understanding me |
| 16. Spending money foolishly | 51. Too few nice clothes |
| 17. Having to ask parents for money | 52. Wanting to earn some of my own money |
| 18. Having no regular allowance | 53. Wanting to buy more of my own things |
| 19. Family worried about money | 54. Not knowing how to buy things wisely |
| 20. Having no car in the family | 55. Too little spending money |
| 21. Not allowed to use the family car | 56. Girls don't seem to like me |
| 22. Not allowed to run around with the kids I like | 57. Boys don't seem to like me |
| 23. Too little chance to go to parties | 58. Going out with the opposite sex |
| 24. Not enough time for play and fun | 59. Dating |
| 25. Too little chance to do what I want to do | 60. Not knowing how to make a date |
| 26. Slow in making friends | 61. Being teased |
| 27. Bashful | 62. Being talked about |
| 28. Being left out of things | 63. Feelings too easily hurt |
| 29. Never chosen as a leader | 64. Too easily led by other people |
| 30. Wishing people liked me better | 65. Picking the wrong kind of friends |
| 31. Being nervous | 66. Getting into trouble |
| 32. Taking things too seriously | 67. Trying to stop a bad habit |
| 33. Getting too excited | 68. Sometimes not being as honest as I should be |
| 34. Being afraid of making mistakes | 69. Giving in to temptations |
| 35. Failing in so many things I try to do | 70. Lacking self-control |
-

QUESTIONS

1. What problems are troubling you most? Write about two or three of these if you care to.
2. Would you like to spend more time in school in trying to do something about some of your problems?
3. Would you like to talk to someone about some of your problems?

- | | |
|--------------------------------------------------|-----------------------------------------------------|
| 141. Can't hear well | 176. Nose or sinus trouble |
| 142. Can't talk plainly | 177. Trouble with my feet |
| 143. Trouble with my eyes | 178. Not being as strong as some other kids |
| 144. Smoking | 179. Too clumsy and awkward |
| 145. Getting tired easily | 180. Bothered by a physical handicap |
| 146. Textbooks hard to understand | 181. Dull classes |
| 147. Trouble with oral reports | 182. Too little freedom in classes |
| 148. Trouble with written reports | 183. Not enough discussion in classes |
| 149. Poor memory | 184. Not interested in certain subjects |
| 150. Afraid to speak up in class | 185. Made to take subjects I don't like |
| 151. Family quarrels | 186. Clash of opinions between me and my parents |
| 152. Not getting along with a brother or sister | 187. Talking back to my parents |
| 153. Not telling parents everything | 188. Mother |
| 154. Wanting more freedom at home | 189. Father |
| 155. Wanting to live in a different neighborhood | 190. Wanting to run away from home |
| 156. Needing a job during vacations | 191. Afraid of the future |
| 157. Needing to know my vocational abilities | 192. Not knowing what I really want |
| 158. Needing to decide on an occupation | 193. Concerned about military service |
| 159. Needing to know more about occupations | 194. Wondering if I'll ever get married |
| 160. Wondering if I've chosen the right vocation | 195. Wondering what becomes of people when they die |
| 161. Not knowing what to do on a date | 196. Learning how to dance |
| 162. Girl friend | 197. Keeping myself neat and looking nice |
| 163. Boy friend | 198. Thinking too much about the opposite sex |
| 164. Deciding whether I'm in love | 199. Wanting more information about sex matters |
| 165. Deciding whether to go steady | 200. Embarrassed by talk about sex |
| 166. Getting into arguments | 201. Being jealous |
| 167. Getting into fights | 202. Disliking someone |
| 168. Losing my temper | 203. Being disliked by someone |
| 169. Being stubborn | 204. Keeping away from kids I don't like |
| 170. Hurting people's feelings | 205. No one to tell my troubles to |
| 171. Feeling ashamed of something I've done | 206. Sometimes lying without meaning to |
| 172. Being punished for something I didn't do | 207. Can't forget some mistakes I've made |
| 173. Swearing, dirty stories | 208. Can't make up my mind about things |
| 174. Thinking about heaven and hell | 209. Afraid to try new things by myself |
| 175. Afraid God is going to punish me | 210. Finding it hard to talk about my troubles |

DIRECTIONS: When you have finished marking the problems which are troubling you, answer the questions on page 5.

-
- | | |
|--------------------------------------------------|-----------------------------------------------------|
| 71. Not eating the right food | 106. Often have a sore throat |
| 72. Often not hungry for my meals | 107. Catch a good many colds |
| 73. Overweight | 108. Often get sick |
| 74. Underweight | 109. Often have pains in my stomach |
| 75. Missing too much school because of illness | 110. Afraid I may need an operation |
| 76. Not spending enough time in study | 111. Don't like school |
| 77. Too much school work to do at home | 112. School is too strict |
| 78. Can't keep my mind on my studies | 113. So often feel restless in classes |
| 79. Worried about grades | 114. Not getting along with a teacher |
| 80. Not smart enough | 115. Teachers not practicing what they preach |
| 81. Being treated like a small child at home | 116. Being criticized by my parents |
| 82. Parents favoring a brother or sister | 117. Parents not liking my friends |
| 83. Parents making too many decisions for me | 118. Parents not trusting me |
| 84. Parents expecting too much of me | 119. Parents old-fashioned in their ideas |
| 85. Wanting things my parents won't give me | 120. Unable to discuss certain problems at home |
| 86. Restless to get out of school and into a job | 121. Choosing best subjects to take next term |
| 87. Not knowing how to look for a job | 122. Deciding what to take in high school |
| 88. Needing to find a part-time job now | 123. Wanting advice on what to do after high school |
| 89. Having less money than my friends have | 124. Wanting to know more about college |
| 90. Having to work too hard for the money I get | 125. Wanting to know more about trades |
| 91. Nothing interesting to do in my spare time | 126. No place to entertain friends |
| 92. So often not allowed to go out at night | 127. Ill at ease at social affairs |
| 93. Not allowed to have dates | 128. Trouble in keeping a conversation going |
| 94. Wanting to know more about girls | 129. Not sure of my social etiquette |
| 95. Wanting to know more about boys | 130. Not sure about proper sex behavior |
| 96. Wanting a more pleasing personality | 131. Awkward in meeting people |
| 97. Being made fun of | 132. Wanting to be more like other people |
| 98. Being picked on | 133. Feeling nobody understands me |
| 99. Being treated like an outsider | 134. Missing someone very much |
| 100. People finding fault with me | 135. Feeling nobody likes me |
| 101. Not having as much fun as other kids have | 136. Being careless |
| 102. Worrying | 137. Daydreaming |
| 103. Having bad dreams | 138. Forgetting things |
| 104. Lacking self-confidence | 139. Being lazy |
| 105. Sometimes wishing I'd never been born | 140. Not taking some things seriously enough |
-

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