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The significance of the reading factor in measuring security in children.

Lois M. Brockman
University of Windsor

THE SIGNIFICANCE OF THE READING FACTOR IN MEASURING SECURITY IN CHILDREN

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by

LOIS M. BROCKMAN
B.A., University of Saskatchewan, 1953

Windsor, Ontario, Canada
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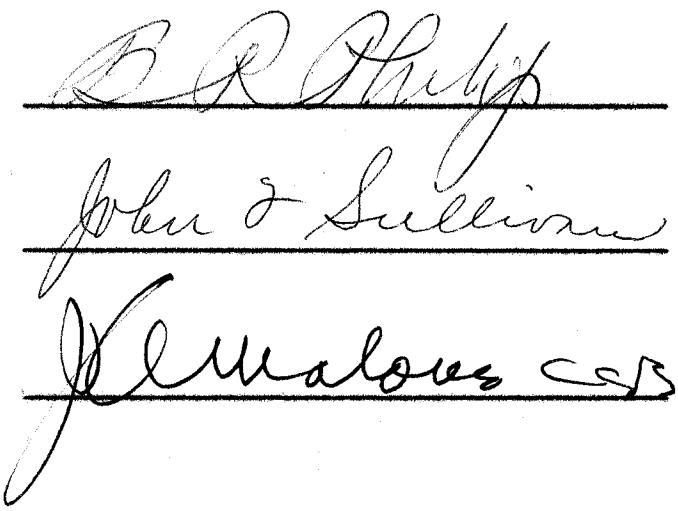

ABSTRACT

The present study investigated the influence of the reading factor on the security score yielded by the Institute of Child Study Security Test (ICS Security Test). Fifty boys in regular classes between grades 4 and 8 were matched to form two groups: (a) twenty-five boys (experimental Ss) diagnosed by psychologists as emotionally disturbed and in attendance at weekly therapy sessions; (b) twenty-five boys (control Ss) in regular school attendance and rated by their teachers as displaying above average level of security both in the classroom and on the playground. Children in whose home a language other than English was spoken and/or the physically handicapped were not selected. The groups were equated by matching pairs on: (a) attendance in either public or separate school system; (b) grade placement; (c) non-language IQ determined from the Non-Language Multi-Mental Test of Terman, McCall and Lorge; (d) socio-economic background measured by W. L. Warner's "Index of Status Characteristics". Within the same month the ICS Security Test, the Dominion Achievement Test in Silent Reading (Dominion Reading Test), and the California Test of Mental Maturity were administered as group tests to all Ss.

An analysis of variance indicated for the entire sample that the ICS Security Test distinguished significantly at .01 level between the experimental and control groups. By dividing the entire sample into older subgroup

(grades 6, 7 and 8) and younger subgroup (grades 4 and 5), the difference between the experimental and control Ss in ICS Security Test scores was significant for both subgroups. The difference was, however, greater for the younger subgroup (at .01 level) than for the older subgroup (at .05 level). Covariance adjustment of the ICS Security Test scores indicated a persistence of significant difference between experimental and control Ss on the ICS Security Test scores for the entire sample (at .01 level). However, covariance adjustment of the Dominion Reading Test scores showed no significant difference between the experimental and control groups either for the whole sample or within subgroups.

It was concluded that a factor other than reading (as measured by the Dominion Reading Test), designated a "security" factor, was measured by the ICS Security Test. The breakdown of the total sample into older and younger subgroups yielded little further information. Each subgroup seemed to follow the pattern of the entire sample. Within the limits of this experimentation we may conclude that, although reading distinguishes the secure from the insecure child, the differentiating factor at work is more than reading, and can be better estimated by a "security" measure. Rather than reading ability influencing the security level of the child, the security level determines significantly the reading ability. This conclusion holds true for both younger and older grade-school age groups.

ACKNOWLEDGEMENTS

The author gratefully acknowledges the suggestions and assistance of Reverend J. A. Malone, C.S.B. and Dr. A. A. Smith in the preparation and writing of this thesis. Thanks are due, also, to the officials and personnel of the Windsor School Systems and the Windsor Group Therapy Project, who so willingly co-operated in testing the children selected as subjects in the investigation.

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CHAPTER I

SURVEY OF THE LITERATURE

Reading and Emotional Stability

The feeling of security or emotional well-being and reading achievement have long been recognized as correlative factors in the development of the mentally healthy child. The reading program forms the core of the elementary school curriculum. Particularly in the first five grades, the emphasis is on the acquisition of basic reading skills. G. M. Gilbert (1957) found, in a survey of problems referred to a guidance centre, that the most frequently cited reason for psychological maladjustment was "academic difficulty". He pointed out that, since there exists a relationship between success in reading and emotional stability in children, it is impossible to divorce failure caused by deficient reading skills from emotional instability.

The relationship of reading achievement to emotional stability has been explained from different viewpoints. Some investigators claim that reading disability causes emotional instability in the child. Others hold that the emotional handicap is the principal cause of retarded reading. Still others suggest that reading achievement and emotional adjustment are mutually reinforcing.

The claim that reading disability causes insecurity seems reasonable in today's literate society, which demands of the individual a facility in using the

symbol of language. It would seem that a person lacking this symbolic ability would naturally feel insecure in a literate community. Children readily recognize that the mastery of language skills is a highly valued objective within the school program. Bower (1960) pointed out that children unsuccessful in reading receive little reward from academic activities, are perceived negatively by their peers, and consequently find school an unfriendly, often hostile,institution. Non-acceptance by teachers and fellow pupils leads to insecurity in the classroom situation.

Of 78 case histories examined, M. G. Fernald (1943) found only four children who were emotionally disturbed before commencing grade one. Reading disability, she concluded, is in itself the cause of emotional disturbance. Recently Buswell (1953), in a study of the interrelationship of achievement and adjustment, observed that academic achievement preceded social acceptability. Durrell (1935, p. 92) reported a confirmation of this rationale when he observed that "the confidence which a child gains through a well-planned reading program has an alleviating effect on emotional difficulties."

Talcott Parsons (1949) considered expectations of achievement and conformity to behavioral standards a major dimension of security. The child's parents, teachers and peers expect he will compete satisfactorily and will achieve prescribed standards in reading. If the child feels he is incapable of fulfilling such expectations, he may refuse to achieve even though he has the capacity. Thus, insecurity induced by failure to meet academic expectations restrains progress in reading achievement. Attainment of adequate reading

skills appears to win for the child social acceptance and ensure a feeling of security in a world that demands that he be literate.

A number of investigators, on the other hand, support the view that emotional disturbance in children causes reading disability. Missildine (1946, p. 272) examined the emotional backgrounds of 30 children in whom reading disabilities appeared. She concluded that "reading disability must be considered a symptom of underlying emotional illness in a great many children who, having trouble with reading, do not respond promptly to specific techniques." Recently, Hallock (1958) reported that nervous symptoms, particularly in fourth grade boys, affect reading achievement significantly. The roots of emotional instability, Blanchard (1936, p. 411) explains, originate in the child-parent relationship: "Children learn first to please parents, and then teachers . . . . If the attitudes towards parents which are transferred to teachers are negative rather than positive, interest in learning decreases thereby, or refusal to learn results."

If wholesome interpersonal relations are necessary to learn effectively, and if emotional disturbance is an underlying factor causing reading disability, then disturbed children in therapy ought to show marked improvement in reading achievement. Bills (1950) found that, with the retarded readers, non-directive play therapy accelerated their achievement in reading. Axline (1947) designed an approach to the reading lesson based on the techniques of non-directive therapy. After three and one half months in the group therapy program, poor second grade readers made achievement gains up to sixteen months in reading level.

Whether deficient reading skills cause insecurity, or emotional instability causes reading retardation, seems to be a problem whose several solutions depend upon the particular points of view, the experimental techniques and the samples thus far studied. No general principle as yet accounts for the mutual relationship between the experiencing of emotional stability and the acquisition of adequate reading skills. That the two are closely related seems certain. Charles Peguy (1943, p. 99) wrote: "Teaching people to read, such would be the sole and true end of a skilful education: let the reader know how to read and all is saved." But the gnawing doubt persists. Will reading skill bring with it security and emotional stability for the child? Or must we teach security and emotional stability in order that the child may learn to read?

Concept of Security

In general, security refers to that quality of emotional stability whereby the individual is able to cope with the specific stresses of his environment while maintaining a state of emotional well-being. In constructing the Security-Insecurity Inventory, Maslow (1952) described security as the feeling of being liked, loved and accepted, the feeling of safety and unanxiousness. Blatz (1944, p. 165) defined security as "the state of consciousness which accompanies a willingness to accept the consequences of one's own decisions and actions."

This latter concept of Blatz was adopted by Grapko (1957) in the construction of the Institute of Child Study Security Test (ICS Security Test). Security, as employed in the ICS Security Test, is specifically defined as "the ability to complete an activity and the willingness to accept one's own decisions, actions and

consequances in the performance of an activity." (Grapko, 1957, p.4). Security then requires that the individual consciously make a decision, that he be able to realize the decision in action, and finally that he be willing to accept the consequences of the action which follows from such decision. The ability and willingness to accept the outcome of the action indicate the quality, degree or level of operative security of the individual.

Security develops in the child from birth. In its early development the child's security is assured by the parents through their decisions, actions and handling of the consequences on his behalf. The adequacy and effectiveness of the parents at this stage of the child's development determine the basic pattern from which his security evolves. As the child matures he is expected to make decisions independently of his parents. The degree to which he is willing and capable of accepting the outcome of such decisions, indicate the independent (hence healthy) quality of his security.

Grapko (1953, Ch. 3) describes the quality or degree of security in terms of the child's independence in making decisions and readiness in accepting consequences. A child who is unable to decide and unwilling to accept the consequences of his actions, is insecure. A child who can make up his mind, act on his decision and accept the outcome willingly, is independently secure. Between independent security and insecurity, Grapko describes three other degrees or levels of security. The maturely dependent child is willing to accept the outcome of his actions provided he can share such responsibilities with a peer. The immaturely dependent child seeks help in making a decision, and support in accepting the consequences.

The level of security designated as Deputy Agent describes the child who avoids accepting the consequences of his actions by resorting to the defence mechanism of excuse, blame or denial. Insecurity is defined as the unwillingness to accept the consequences of one's decisions or actions.

The adequately functioning member of society makes independent decisions, executes them and is willing to accept whatever consequences result therefrom. Such behavior is the mark of a mentally healthy citizen. Security level is, then, an index of the mental health of an individual.

The ICS Security Test

Grapko designed the ICS Security Test (1957) for the purpose of measuring the personal security and consistency of behavior of a child in grades 4 to 8. Its aim is to assist the teacher in understanding the child better, thus enabling him to give the kind of direction and encouragement that will promote the development of sound mental health habits.

The ICS Security Test is organized around fifteen situations in the school day of an ordinary youngster named Jimmy. It assumes that the child being tested will identify with Jimmy and, in so doing, project his own personal reactions to each situation in which he finds Jimmy. The child accomplishes this identification by ranking in the order he judges most fitting, five possible solutions to the problems Jimmy encounters in each of the fifteen situations. The statements of these solutions represent the five security levels or categories (supra).

By ranking these statements according to the order he judges most

fitting, the child reveals the level of security at which he habitually acts. The ICS Security Test yields two measures of the child's test performance: (a) a consistency score which is a measure of the degree of uniformity the child shows in ranking the statements at the same level of security; (b) a security score which is a measure of the degree a child's behavior agrees with an ideal type of behavior. The raw consistency and security scores, ranging from 0 to 100, are transformed into percentile scores following the norms provided in the test manual. Since the mean scores of the normative sample differed significantly between the older children (grades 6, 7 and 8) and the younger children (grades 4 and 5), and between boys and girls, four sets of percentile norms were provided. The raw consistency and security scores for the older and younger children are therefore interpreted according to their respective percentile norms.

The Problem

The specific problem of this investigation was to determine whether the ICS Security Test, published by Michael F. Grapko for the purpose of measuring the security level of children between grades 4 and 8, truly yields a valid measure of security. The ICS Security Test requires the child to read extensively and silently without assistance from the testor. The test assumes that the child has acquired sufficient reading skill and that he is capable of comprehending the printed word. It would seem that the child whose reading comprehension is poor, and reading vocabulary is small, is handicapped at each demand the test makes upon him. The question posed itself, then, if the ICS Security Test relies so heavily on reading, is the measure it yields a "reading" rather

than a "security" estimate? Perhaps the diagnosis of "insecurity" concluded from the ICS Security Test score simply means that the subject is a slow or otherwise inadequate reader. The measure of his security level, then, would be largely determined by his reading comprehension.

The problem, stated in the form of the null hypothesis, was: the reading factor involved in the ICS Security Test does not influence the security score obtained.

CHAPTER II

METHOD

Subjects

The sample selected for the present investigation consisted of two groups of boys (Ss), an experimental group and a control group. The groups were equated with respect to certain relevant variables: (a) attendance in either Public or Separate School Systems; (b) grade placement; (c) non-language IQ as measured by the Non-Language Multi-Mental Test of Terman, McCall and Lorge (1942); (d) socio-economic background, determined according to the "Index of Status Characteristics" of William Lloyd Warner (1957). Boys who were physically handicapped and/or in whose home a language other than English was spoken were eliminated from the sample.

The experimental group (assumed to be insecure) was composed of 25 boys between grades 4 and 8 whom psychologists diagnosed as emotionally disturbed. These boys, all of whom were pupils in the regular classrooms in the Windsor School System, were attending weekly therapy sessions at the time of testing. Another 25 boys between grades 4 and 8 were selected from the regular classrooms in the Windsor School System as control Ss (assumed to be secure). Insecure Ss were eliminated from the control group on the basis of the teacher's judgment of the security level of each.

Table 1 shows the closeness of the matching on IQ and socio-economic background.

Table 1

The Means, Standard Deviations and t ratios for the Differences between the Means of the Matching Factors of IQ[a] and Socio-economic Level[b]

		Groups					
		Entire		Older		Younger	
Factor	Statistic	E	C	E	C	E	C
IQ	Mean	91.80	93.16	87.07	88.73	98.90	99.80
	s.d.	14.94	15.15	13.00	13.42	14.75	15.19
	t ratio	.31		.33		.13	
Socio-economic	Mean	46.47	46.49	48.93	49.07	42.80	42.60
	s.d.	9.51	9.04	8.27	8.49	10.04	8.44
	t ratio	.01		.04		.05	

[a] As measured by the Non-Language Multi-Mental Test by Terman, McCall and Lorge, 1942.

[b] As determined by the Index of Status Characteristics of William Lloyd Warner, 1957.

The t ratio for the difference between means indicated that the means of the non-language IQ of the experimental and control groups were nonsignificant. Likewise, there was no significant difference between the means of the socio-economic

ratings for the entire experimental and control groups and for the older and younger subgroups.

Tests Employed

The Non-Language Multi-Mental Test by E. L. Terman, William A. McCall and Irving Lorge (1942), by means of pictorial symbols, provided an appraisal of intelligence without requiring reading ability on the part of the testee. The reported reliability of the test is .86 for Form A and .90 for Form B. It has been standardized for children in grades 3 through 8 on a sample of 2500 children representative of elementary schools, differences in socio-economic backgrounds, and average intelligence.

The "Index of Status Characteristics" of William Lloyd Warner (1957) is primarily an index of socio-economic factors based on a seven-point weighted rating scale. The scale includes four factors: the occupation of the wage-earner in the family, the source of income of the wage earner, the type of house and the dwelling area in which the ratee lives. The present study followed Warner's descriptions of occupational categories and income brackets. The evaluation of house type and dwelling area were determined according to the quality ratings of homes and living areas outlined by E. G. Faludi and Associates, the Town Planning Consultants Limited, Toronto, in their comprehensive survey of the City of Windsor in 1959.

The Dominion Achievement Test in Silent Reading (Dominion Reading Test) employed to assess the variable factor, namely, silent reading ability of the

Ss, is a diagnostic test in paragraph reading "designed to measure achievement in silent reading." The reported internal consistency estimates of reliability are .858 for Form A and .843 for Form B. The Dominion Reading Test has been standardized in Ontario schools. The revised norms of 1953, used in the present investigation, were obtained from a sample of approximately 7000 pupils in Ontario schools. The measure obtained from the Dominion Reading Test is in terms of grade norms.

The California Test of Mental Maturity, Elementary Form, was also given to check the validity of the administration of the Non-Language Multi-mental Test and the Dominion Reading Test. This test yields two measures: a non-language IQ and a language IQ which can be converted into grade placement norms.

The ICS Security Test, previously described (supra, p. 6), provided an objective measure of the assumed security level of each S.

To ensure proper selection of secure Ss as controls, the teachers were provided with a definition of the security concept underlying the ICS Security Test together with descriptions and examples of the five levels of security as outlined in the test manual. On a five-point rating scale (see Appendix C), the teacher indicated his estimate of the chosen control S's security as he observed it (a) in the classroom, and (b) on the playground. Children who were rated by their teachers in the lower two levels of security, Deputy Agent or Insecurity, were eliminated from the control sample. Seventy per cent of the control Ss were rated in the two levels of greatest security. Six months after the original judgment

a verbal re-estimate of the security level of the control Ss by a different teacher, who was also familiar with the children, confirmed the initial ratings in allcases.

Testing

Prior to testing, approximate matching with regard to Public or Separate School systems, grade placement, IQ, and socio-economic background was possible from information contained in the clinical files and in the Ontario School Records. Visits to each home of potential Ss provided information necessary to calculate the socio-economic rating.

The experimental group was tested during two regular therapy sessions. The five therapy groups each consisted of six to eight Ss. The Non-Language Multi-Mental Test and the ICS Security Test were given during a first session,and the Dominion Reading Test and the California Test of Mental Maturity during a second session.

The control group was tested during regular school hours. Those Ss whose teachers' ratings indicated any doubt of possible security were eliminated from the control sample. The final matching of control and experimental Ss was made on the basis of the Non-Language Multi-Mental Test IQ scores. The control Ss finally selected were administered the ICS Security Test, the Dominion Reading Test and the California Test of Mental Maturity.

Testing these children often presented many difficulties. Whenever there was any room to doubt optimal conditions in the testing situation, the B-forms of the tests were used to check for valid measurements.

CHAPTER III

RESULTS

Figures 1 and 2 illustrate the distributions of the Dominion Reading Test scores for the Ss of the experimental and control groups. The distribution of the Dominion Reading Test scores of the experimental Ss was negatively skewed with a mean score of 5.35. Reading scores of the control Ss were normally distributed with a mean of 6.40. A difference of 1.05 was observed between the mean scores of the experimental and control groups on the Dominion Reading Test scores.

The distribution of ICS Security Test scores of the experimental Ss approached normality, whereas the security scores of the control Ss was positively skewed. The mean security score of the experimental Ss was 64.28; of the control Ss, 75.57, indicating a difference of 11.29 between the groups in ICS Security Test scores.

The results of the analysis of variance for the entire group, and for the older and the younger subgroups, indicated the differences between the scores obtained by the experimental and control Ss on (a) the ICS Security Test and (b) the Dominion Reading Test. In the entire group, as well as in the subgroups, the experimental and control Ss differed significantly in their security scores. A significant difference in the means of the reading scores was obtained for the entire group, but not for the subgroups.

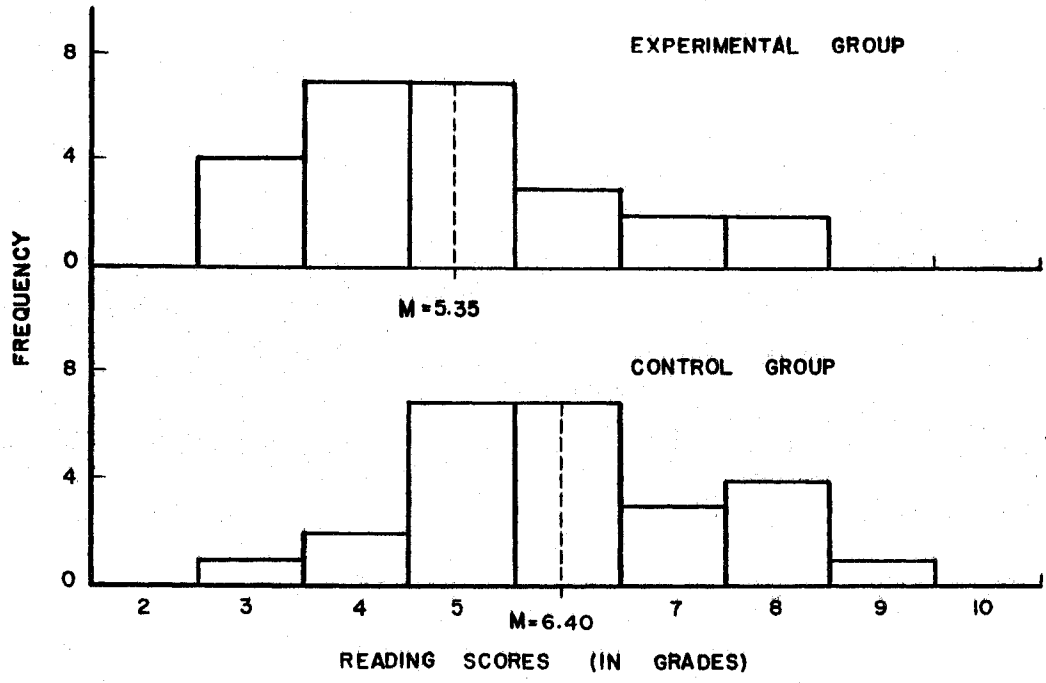


Fig. 1. Distribution of Dominion Reading Test Scores

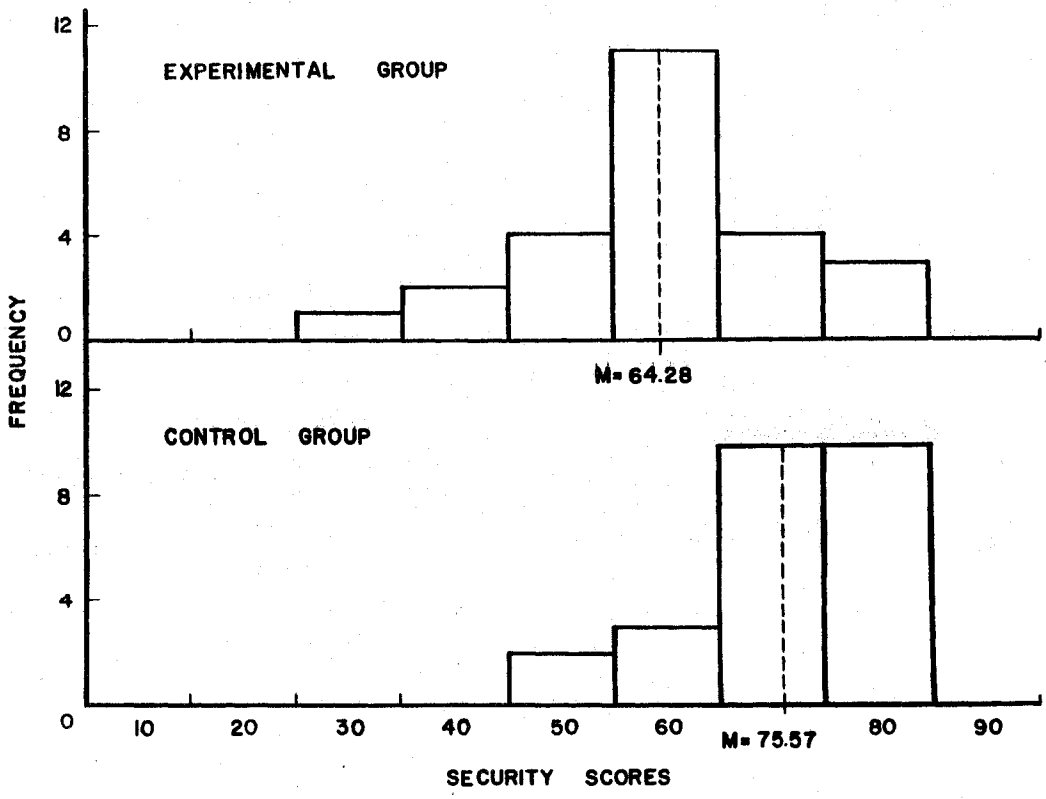


Fig. 2. Distribution of ICS Security Test Scores

However, before the significance of these differences could be assessed, the possible dependence of security scores on reading ability (or reading scores on security) was considered. The analysis of covariance appeared the best way to determine this dependence. Each variable has been separately adjusted for its linear dependence on the other. As will be seen, the experimental and control groups differed significantly in both reading and security scores before covariance adjustment. After adjustment the difference in reading scores for the older and younger subgroups was no longer significant.

For the entire group (N=50) a difference significant at the .01 level was observed between the scores of the experimental and control Ss on the ICS Security Test (Table 2). The Dominion Reading Test scores of the experimental and control groups also differed significantly, although at the lower significance level of .05. When the observed difference in reading score was taken into account, the adjusted mean security scores for the experimental and control groups still differed significantly at the .01 level. On the other hand, when statistical allowance was made for the difference in security score, the adjusted mean reading scores no longer differed significantly.

For the normative sample the ICS Security Test manual reports a significant difference between the mean scores of grades 4 and 5 children and grades 6, 7 and 8 children (see supra, p. 7). Consequently, the data of the entire group were considered in terms of two subgroups: the "younger" subgroup (N=20) and the "older" subgroup (N=30), in an attempt to determine which subgroup, if either, contributed more to the over-all difference observed between

Table 2

Analysis of Variance and Covariance Adjustments for ICS Security Test Scores (S) and Dominion Reading Test Scores (R) Obtained by the Entire Group (N=50)

	Total	Within	Between	F ratio
Sum of products	403.33	265.27	148.06	
Sum of sq.: S	7224.94	5631.07	1593.87	13.59**
Sum of sq.: R	115.86	101.92	13.95	6.58*
df	49	48	1	
Adjusted ΣS^2	5806.91	4986.70	820.21	7.73**
Adjusted ΣR^2	93.12	90.26	2.86	1.49
df	48	47	1	
Correlation	.44	.34		
df for r	48	47		
b_{RS} value	3.50	2.51		
b_{SR} value	.06	.05		

* Significant at the .05 level
** Significant at the .01 level

the experimental and control groups of the entire sample. The results of this breakdown and the subsequent analyses are found in Tables 3 and 4.

In the older subgroup (Table 3), the ICS Security Test scores of the experimental and control Ss differed significantly at the .05 level. Differences in the Dominion Reading Test scores for the same Ss, however, were not significant. With covariance adjustment of the Dominion Reading Test scores for unequal security scores, the significant difference between the experimental and control Ss, in both their reading and security scores, disappeared.

In the younger subgroup (Table 4) the ICS Security Test scores of the experimental and control Ss differed significantly at the .01 level, but their Dominion Reading Test scores did not differ significantly even at the .05 level. Covariance adjustment of the ICS Security Test scores and the Dominion Reading Test scores resulted in a shift of the significant differences parallel to that observed for the entire group and for the older subgroup. The ICS Security Test scores adjusted for uncontrolled reading scores did not reach significance at the .05 level; the Dominion Reading Test scores adjusted for unequal security scores remained non-significant.

It was therefore observed that the ICS Security Test distinguished significantly between the experimental and control groups. This conclusion pertained also to the older and younger subgroups where security scores significantly distinguish between experimental and control Ss. The Dominion Reading Test distinguished between the experimental and control groups of the entire sample (at .05 level), but following adjustment of reading scores for variability in security

Table 3

Analysis of Variance and Covariance Adjustments for ICS Security Test Scores (S) and Dominion Reading Test Scores (R) Obtained by the Older Subgroup (N=30)

	Total	Within	Between	F ratio
Sum of products	143.56	77.04	66.52	
Sum of Sq.: S	3261.83	2723.35	538.48	5.54*
Sum of Sq.: R	72.57	64.35	8.22	3.57
df	29	28	1	
Adjusted ΣS^2	2977.84	2631.12	346.72	3.56
Adjusted ΣR^2	66.25	62.17	4.08	1.77
df	28	27	1	
Correlation	.30	.18		
df	28	27		
b_{RS} value	1.98	1.20		
b_{SR} value	.04	.03		

*Significant at the .05 level

Table 4

Analysis of Variance and Covariance Adjustments for ICS Security Test Scores (S) and Dominion Reading Test Scores (R) Obtained by the Younger Subgroup (N=20)

	Total	Within	Between	F ratio
Sum of products	201.69	118.66	83.03	
Sum of Sq.: S	3502.82	2298.47	1204.35	9.43**
Sum of Sq.: R	35.45	29.73	5.72	3.47
df	19	18	1	
Adjusted ΣS^2	2356.32	1824.87	504.45	3.45
Adjusted ΣR^2	23.84	23.60	.00	1.39
df	18	17	1	
Correlation	.54	.46		
df for r	18	17		
b_{RS} value	5.69	3.99		
b_{SR} value	.06	.05		

** Significant at the .01 level

scores, the significance of this difference was not maintained. In the older and younger subgroups even the unadjusted Dominion Reading Test scores did not distinguish between experimental and control Ss.

The effects of the covariance adjustment of the ICS Security Test scores and the Dominion Reading Test scores of the experimental groups in contrast to the control group are illustrated in Figures 3 and 4. The mean scores of the respective groups and tests were adjusted by using the appropriate regression coefficient (b_{RS} or b_{SR} in Tables 2, 3 and 4).

The mean scores of the control group were in general higher than the mean scores of the experimental group. The mean scores of the older subgroup were also in general higher than the mean scores for the younger subgroup.

Adjustment of the ICS Security score means for initial differences in reading scores decreased the difference between the security score means of the experimental and control groups. Such lessening of the difference was due primarily to the raising of the experimental security score means with adjustment. The security score mean of the younger subgroup, in particular, was raised by the covariance adjustment. The security scores means of the control groups were lowered only slightly by the covariance adjustment.

Covariance adjustment of the Dominion Reading Test score means for initial differences in ICS Security Test scores effected an appreciable decrease in the difference between the experimental and control groups in mean reading scores. The disappearance of the significant difference between the experimental and control group in Dominion Reading Test scores observed previously in the

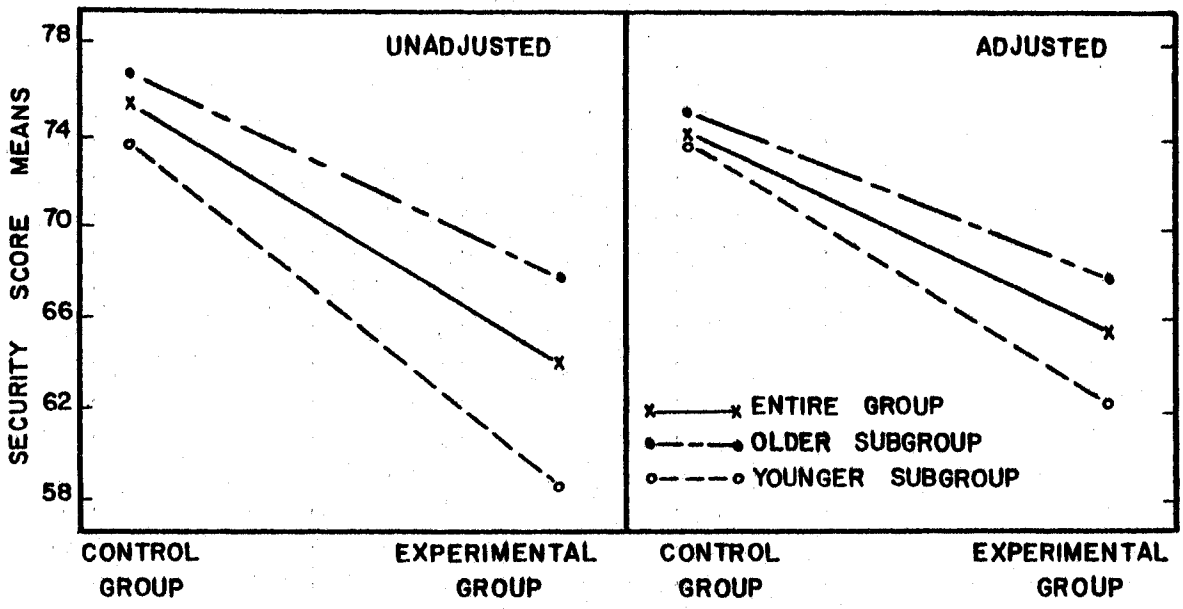


Fig. 3. Effect of adjustment of the ICS Security Test score means.

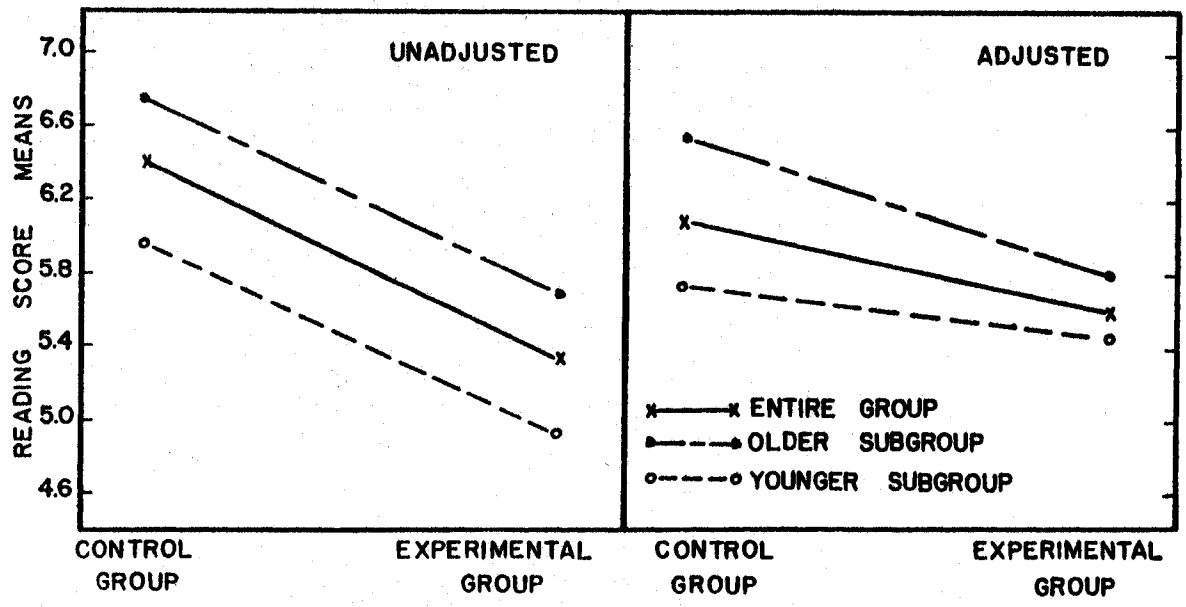


Fig. 4. Effect of adjustment of the Dominion Reading Test score means.

covariance adjustment of the scores (Tables 2, 3 and 4) was evidently attributable to the raising of the reading scores of the experimental group after differences in ICS Security Test scores were taken into account. Adjustment of the reading score means lowered the means for the control group, whereas it raised the means of the experimental group. The mean reading score of the younger experimental subgroup, in particular, was raised so that it was almost equal to that of the younger control subgroup.

In general, then, the significant difference in security scores between the experimental and control groups remained, even after adjustment for possible differences in reading ability. On the other hand, the signficant difference in reading scores between the experimental and control groups vanished after adjustment for differences in security level.

CHAPTER IV

DISCUSSION AND CONCLUSION

Discussion

The hypothesis that the language factor involved in the ICS Security Test does not influence the security measure it yields was generally supported by the data of this study. The security score was a measure of the child's independence in making his own decisions and of his willingness to accept the consequences of action initiated by such decisions. The results indicated that acquired reading skills did not significantly affect the testee's ability to judge and rank the statements representing the five levels of security described in the ICS Security Test. A deficiency in reading skills and/or reading comprehension would not then vitiate a security measure obtained on the ICS Security Test.

The correlation between security and reading scores ($r = .34$) indicated that the ICS Security Test and the Dominion Reading Test were to some extent measuring a common factor. Covariance adjustment of the scores indicated that if the Ss were all reading at the same level the experimental group would still differ significantly from the control group in security scores.

The ICS Security Test scores of the experimental Ss were distributed differently from what was expected. Owing to the selection of experimental Ss who, on the diagnosis of emotional disturbance, were assumed to be insecure, the expected distribution of the security scores would be negatively skewed.

Similarly, it would be anticipated that the distribution of the security scores of the control Ss, judged secure by their teachers, would skew positively. The security scores of the control Ss were positively skewed as expected (Fig. 2). However, the security scores of the experimental Ss were normally distributed. Because the experimental subjects were selected on the assumption that a child clinically diagnosed as emotionally disturbed is insecure, it would seem that what psychologists consider emotional disturbance may not be insecurity as defined by the security theory on which the ICS Security Test is constructed. The data of this study indicated that the ICS Security Test significantly measured a factor other than reading as estimated by the Dominion Reading Test. However, it would seem that this factor of the ICS Security Test is other than, or but one of, the factors that clinical psychologists define as emotional disturbance.

The effectiveness of the ICS Security Test as a tool which teachers may use to discover the insecure child as defined by the security concept of Blatz and Grapko (see supra, pp. 4f) seems to be confirmed by the results of the present investigation. The clear and simple instructions for administration of the test and the percentile interpretation of the raw scores allow even the untrained testor to use it profitably. The ICS Security Test, as a group test, proves suitable and practical for use in large school systems. However, the long and tedious method of calculating the raw scores may deter a busy teacher from readily employing the test.

The conclusions of such investigators as those cited in the introduction of this work do not, strictly speaking, apply to the reading factor involved in the

ICS Security Test. This finding may be due to the fact that the concept of security as specifically defined in the ICS Security Test does not correspond to emotional instability as thought of by these investigators. The incompatible conclusions of these investigators may be the result of differences in definition of concepts such as emotional disturbance or security. It appears true that emotional factors impede the acquisition of reading skills as suggested by Missildine (1946), Blanchard (1936), Hallock (1958), Bills (1950) and Axline (1947). It also seems true, as Bower (1960), Fernald (1943), Buswell (1953) and Parsons (1949) imply, that deficiency in acquired reading skills does seem to affect security. The ICS Security Test score does, however, appear to be a significant measure of a factor other than, and almost independent of, the reading factor measured by the Dominion Reading Test.

Conclusion

The purpose of the present investigation was to determine the influence of the reading factor involved in the ICS Security Test on the security measure it yields. For the entire sample ($N=50$) the ICS Security Test distinguished significantly at the .01 level between the experimental group (insecure Ss) and the control group (secure Ss), whereas the Dominion Reading Test did not. Some correlation was evident between security and reading scores ($r = .34$). Covariance adjustment of security scores for differences in the initial reading scores lowered the .001 significance level to the .01 level. A similar adjustment of reading scores for initial differences in security scores resulted in the disappearance of the significant difference between the experimental and control groups in Dominion

Reading Test scores. For both the older and younger subgroups the ICS Security Test distinguished significantly between the experimental and control Ss (.05 level) but the Dominion Reading Test did not. After covariance adjustment of the reading scores of the older and younger subgroups, neither the adjusted security scores nor the adjusted reading scores were significant.

It was therefore concluded, within the limits of this investigation, that the ICS Security Test yields a measure of security as it is defined for this test. The initial hypothesis was thus supported: the reading factor involved in the ICS Security Test does not significantly affect the security measure it yields.

APPENDIX A

Individual Scores Obtained on the Matched Factors

		Matched Factors			
		IQ [a]		Socio-economic [b]	
Ss	Grade	E	C	E	C
1	8	89	94	39	38
2	7	110	113	53	52
3		101	101	54	55
4		68	65	60	57
5		98	86	53	54
6		97	93	43	44
7	6	74	74	38	37
8		84	89	57	61
9		81	78	44	44
10		95	96	33	33
11		72	92	51	48
12		86	91	64	63
13		100	107	49	50
14		63	64	51	54
15		88	88	45	46
16	5	114	114	36	36
17		92	96	54	56
18		92	91	40	39
19		132	133	32	34
20		75	77	48	47
21		102	103	25	29
22		93	92	54	54
23		94	93	40	39
24		105	110	58	50
25	4	90	88	41	42

[a] Scores from the Non-Language Multi-Mental Test by Terman, McCall and Lorge (1942).

[b] Ratings determined by the Index of Status Characteristics of William Lloyd Warner (1957).

APPENDIX B

Individual Scores Obtained on the ICS Security Test and the Dominion Reading Test

	ICS Security Test				Dominion Reading Test	
	Consistency		Security			
Ss	E	C	E	C	E	C
1	15.31	19.36	67.33	71.33	8.9	9.0
2	11.18	58.34	63.33	85.00	8.8	8.0
3	7.70	13.38	56.67	59.67	5.2	5.8
4	52.50	59.05	85.33	86.00	3.8	5.2
5	48.22	31.86	79.33	76.33	5.8	5.4
6	13.73	56.06	68.00	82.67	6.9	7.3
7	10.91	5.54	61.33	59.00	5.0	5.6
8	17.60	27.19	65.67	71.33	3.8	6.2
9	7.04	21.25	63.33	71.00	5.0	8.0
10	57.11	35.20	83.00	77.33	7.3	6.9
11	5.90	49.63	49.30	84.00	3.8	4.7
12	7.30	62.92	59.00	86.00	5.0	7.7
13	39.90	58.52	79.00	81.67	5.6	8.6
14	8.45	27.72	61.33	75.33	4.1	5.6
15	42.59	61.51	80.67	83.00	6.2	6.9
16	9.77	43.56	56.00	81.00	7.0	7.2
17	1.84	23.70	45.67	71.80	4.7	6.0
18	43.74	14.78	79.00	64.33	6.2	3.5
19	27.78	34.50	75.00	76.50	5.8	6.4
20	25.52	31.53	65.33	72.84	3.2	5.2
21	8.80	13.82	36.00	63.66	4.7	4.4
22	21.47	57.11	55.70	86.33	4.4	8.6
23	18.22	24.55	67.00	68.33	4.1	5.6
24	11.79	42.86	63.50	80.00	4.1	6.4
25	5.98	27.90	41.33	75.00	4.4	6.0

APPENDIX C

ICS Security Test and Scoring Form

Dominion Reading Test

Non-Language Multi-Mental Test

Security Rating Form for Teachers

California Test of Mental Maturity

Name ..... Age ..... Boy or Girl (circle one)
First Name Last Name

School ..... Grade ..... Date .....

ELEMENTARY FORM—Grades 4 to 8

THE STORY OF JIMMY

This is a story about Jimmy. This story is similar to a game because we want to find out what Jimmy is like. In a way, Jimmy is very much like you. He lives at home with his mother and father, he goes to school, he likes to play games, and throughout the day he has to make up his mind about many things.

Now in this story we want to find out what you think Jimmy is most likely to do when different things happen to him. Each time Jimmy has to make up his mind, he will have five choices. After you read over the five choices, pick out what you feel Jimmy is most likely to do. Then pick out what you feel Jimmy will choose as his second, third, fourth and fifth choice.

As you read the story about Jimmy and come to a part where Jimmy has to make up his mind, you will stop and write in the brackets the numbers 1, 2, 3, 4, or 5 after each of the five choices, that is in the order that Jimmy will choose them. Therefore, you will

write 1 after what you feel Jimmy chooses to do first .....(1)
write 2 after what you feel Jimmy chooses to do second .....(2)
write 3 after what you feel Jimmy chooses to do third .....(3)
write 4 after what you feel Jimmy chooses to do fourth .....(4)
write 5 after what you feel Jimmy chooses to do last .....(5)

Before you begin, we want to say that there are no right or wrong answers. The only right choices are those that *you* think Jimmy will make and the order in which Jimmy will make them from one to five. Are you ready?

NOW TURN THE PAGE.

Jimmy goes to school. He gets up in the morning, gets washed and dressed, and then greets his mother at breakfast. This morning, however, Jimmy slept in and when he awoke he found that he was going to be late for school. Since Jimmy isn't usually late for school, he wasn't too sure what to do. After a moment it occurred to Jimmy to:

give the excuse that the alarm clock didn't ring ..... ( )
wait for his mother to help him hurry up ..... ( )
rush as fast as possible so as not to be too late ..... ( )
start to cry ..... ( )
explain to the teacher when he arrived late at school ..... ( )

Jimmy was soon downstairs. His breakfast was on the table. Being late, it seemed to Jimmy that his mother gave him more than usual to eat this morning. Jimmy looked up at the clock and saw that it was seven minutes to nine. Jimmy wanted to leave almost half of his breakfast. However, Jimmy's mother said that growing boys need to eat all their breakfast. Jimmy decided to:

ask if she would let him leave some today ..... ( )
begin to cry ..... ( )
say that he doesn't feel too well this morning ..... ( )
ask if she would take some away ..... ( )
finish eating what was left ..... ( )

Jimmy was ready for school. He said good-bye to his mother and hurried out of the door. He was almost at school when suddenly he remembered that he was supposed to bring his ball this morning. His friends planned to play catch at recess, and Jimmy had promised he would bring his ball. Jimmy was already late so he couldn't very well turn back. The boys were certainly going to be disappointed. Jimmy wondered whether to:

hope that his friends would forget he was to bring the ball ..... ( )
ask the teacher if he could borrow the school ball ..... ( )
tell them that he wasn't interested in playing catch today ..... ( )
suggest another game they could play ..... ( )
count on his mother to remember to bring the ball ..... ( )

Jimmy arrived at school. The grounds were empty and everyone was in class. Jimmy went quickly to his room and as he entered he found that everyone was seated and the teacher had already started the lesson. Jimmy felt that he might have to give the teacher some explanation for being late. He wasn't too sure what he would say. Jimmy wondered whether to:

say that he would try his best to plan not to be late again ..... ( )

count on the teacher not asking for an explanation ..... ( )

tell the teacher that he slept in ..... ( )

hope that the teacher wouldn't be too angry at him ..... ( )

say that it wasn't his fault he was late ..... ( )

After Jimmy sat down in his seat, the teacher continued with the lesson. This morning the lesson was in arithmetic. Jimmy listened very carefully, but soon realized that he didn't understand some of the things. The other children seemed to know more arithmetic than he did. Jimmy knew that the teacher was friendly and would give him extra help if necessary. Jimmy wasn't sure what to do. After some thought Jimmy decided to:

work a little harder at arithmetic ..... ( )

not worry since arithmetic isn't really important ..... ( )

wait for the teacher to give him more help ..... ( )

work at arithmetic together with his friend ..... ( )

cover up his arithmetic work book so no one would see it ..... ( )

Fifteen minutes before recess the teacher announced that it was time for free reading. During this period the children go to the book shelf and pick a book they wish to read. Jimmy was looking forward to this because he was anxious to finish a book on adventure which he had started the day before. The story was exciting and the book had some very interesting pictures in it. When Jimmy got to the book shelf he found that some one else had already taken the book. He looked around and saw that Fred was busy reading it. Jimmy wasn't happy about this so he decided to:

ask the teacher to tell Fred to give him the book ..... ( )

ask Fred to let him have the book when he was through with it ..... ( )

go back to his seat and be glad that now he doesn't have to read a book ..... ( )

start on another book ..... ( )

return to his seat and just sit until the reading period is over ..... ( )

Finally the recess bell rang and it was time for the children to put their books away and get ready to go outdoors. Jimmy was thinking about what he would like to play. He would have played catch with his friends but of course he had forgotten to bring the ball. Soon the children were outside running, jumping, yelling and having a lot of fun. Some of the boys started to play "tag" and in time Jimmy was "it". Jimmy was a good runner and before long he had trapped Bobby in the corner of the yard and tagged him. Bobby quickly turned around and tagged Jimmy right back and ran away. Jimmy didn't think that it was fair because he should be given a "count of ten" to get away. Bobby ran away, yelling that Jimmy was "it". Jimmy decided to:

start to chase someone else ..... ( )

go away and play by himself ..... ( )

have everyone agree on the rule before starting to chase someone else ..... ( )

quit because there isn't much fun in playing tag ..... ( )

tell the other boys not to let Bobby play tag with them ..... ( )

After a while the bell rang and recess was over. The children got ready to go back into the school. When the children were back in their seats, the teacher began the lesson. Just as the teacher started, there was a knock at the door. The teacher was wanted out of the room. She told the class to keep busy with their readers while she was away. The boys and girls got their books out and began to read to themselves. While the teacher was out Billy thought he would be smart, so he sneaked up to the

blackboard and drew a picture of a donkey, and printed JIMMY under it, and hurried back to his seat. Jimmy didn't think this was funny so he went up to the blackboard to rub his name off. Just as he rubbed off his name, the teacher walked into the room. Jimmy realized that it looked as if he were disobeying and really didn't know what to say to the teacher. Jimmy wondered whether to:

tell the teacher he didn't mean to be out of his seat ..... ( )
tell the teacher that it was all Billy's fault ..... ( )
tell the teacher he was sorry and would not leave his seat again ..... ( )
ask the teacher to let him off this time ..... ( )
face up to the fact that he was out of his seat ..... ( )

Before Jimmy could say anything, the teacher told him to return to his seat and he would be given some extra work to do. At Jimmy's school there is a rule that any boy or girl who disobeys is given extra work which the children must do after school. Jimmy didn't feel that it was entirely his fault. However, he decided to:

say that it wasn't his fault at all ..... ( )
do the extra work since he was out of his seat without permission ..... ( )
accept the extra work since it is important to keep the rules ..... ( )
tell the teacher that she should make an exception in his case ..... ( )
say the rule isn't fair ..... ( )

The teacher then began the reading lesson. The boys and girls are asked to stand up and read certain parts aloud for the class. Some of the children read very well. However, Johnny is the best reader in the class. The teacher usually asks Johnny to read when she wants to show the class how well it can be done. This morning Jimmy was asked to stand and read aloud before the class. Except for a few mistakes, Jimmy read his part quite well. The teacher then asked Johnny to read. Johnny, of course, made no mistakes at all. As Jimmy listened to Johnny he thought he would:

listen carefully to Johnny so it would help him in his reading ..... ( )

practice his reading ..... ( )

wait for the teacher to help him more with his reading ..... ( )

wait since he wasn't sure what to do about his reading ..... ( )

give up trying to improve since he doesn't like to read anyway ..... ( )

The rest of the morning went by quickly. After lunch the children made plans for a Hallowe'en party and everyone was excited in preparing for it. The teacher passed around coloured paper and paste and she showed the children how they could make their own masks. This was new for the children since they had never made masks out of paper. Jimmy listened to the teacher's instructions but wasn't quite sure how to go about it. Jimmy wanted a good mask so he decided to:

tell himself that he wasn't good enough to make a mask on his own ..... ( )

use his own ideas in making a mask ..... ( )

wait for the teacher to make most of it for him ..... ( )

buy a mask at the store since it wasn't worth the trouble to make one ..... ( )

work together with another boy on both their masks ..... ( )

The children were having so much fun that before they noticed, it was time to go home. The teacher asked the children to put their things away. At Jimmy's school the teacher waits until everyone is ready and the whole class is dismissed at once. After the children get outside, the boys and girls meet their friends and go home together. This day Jimmy was in a hurry so he didn't wait for his friends. He ran off home by himself. Sometimes when Jimmy is in a hurry, he takes a short cut by climbing over a neighbour's fence and crossing through the yard. Jimmy decided that he would take the short cut today. As he climbed the fence and jumped, his shoe caught in the wire and he fell down. Jimmy's hand was scratched and there was some blood on it. Jimmy got up and looked at his hand. As he saw the blood Jimmy wondered whether to:

run home to show his mother ..... ( )

give the fence a good hard kick ..... ( )

start to cry ..... ( )

hurry home to put some iodine on it ..... ( )

wipe the blood off with his handkerchief before going on ..... ( )

Finally Jimmy got home and after awhile he asked his mother if he could go to the store. They had just received the new kind of gun that Jimmy's favourite T.V. star uses. It even had the T.V. star's name on it. Jimmy had saved enough money to be able to buy it. It cost one dollar and thirty-nine cents. Jimmy's mother said that he could go and buy the gun if he wanted to spend his money that way. In a very short time Jimmy was at the store and had bought the gun.

On his way home, Jimmy played with the gun and was really excited about it. As Jimmy got closer to home, he met some of his friends. He showed his new gun to them. They all agreed that it was really swell. His friends then told Jimmy that they had got their mothers' permission to go to the show and they wondered if Jimmy could come along. Jimmy was certainly interested since his favourite cowboy was playing in the picture. He was sure his mother would give him permission to go. However, Jimmy had already spent all his money on the gun. The boys asked Jimmy to make up his mind. Finally Jimmy decided to:

tell his friends that he didn't like going to shows ..... ( )

feel very sorry that he had spent all his money on the gun ..... ( )

tell his friends he had already spent his money and couldn't go with them ..... ( )

ask his mother for part of next week's allowance so he could go to the show ..... ( )

borrow some money from his friend and pay him back when he got his allowance ..... ( )

When Jimmy got home, he had his supper and settled down to do his homework. The teacher didn't usually give home work to the children, but this day the teacher asked all the children to write a short story about where they would like to go during their summer vacation. Jimmy had several ideas for his story. However, Jimmy couldn't remember the names of some of the places they visited on their motor trip last year, nor how

to spell some of the names. Jimmy was sure that his father would remember and that his father was very good at spelling the names too. Jimmy looked up from his work and saw that his father was busy reading the newspaper. Jimmy hesitated for a moment and wondered whether to:

ask his father if he might borrow the road maps they used last summer ..... ( )
ask his father to help him when he finished the paper ..... ( )
say nothing to his father since he gets angry when Jimmy can't do his work ..... ( )
not bother his father since he is always too busy ..... ( )
interrupt his father since he is always willing to help him ..... ( )

When Jimmy finished his homework, he played with his toys. He enjoys building things and likes to play with his meccano set. The evening went by quickly. It was getting late and time for Jimmy to go to bed. After Jimmy had changed into his pajamas and washed and brushed his teeth, he was ready to say goodnight to his mother and father. At Jimmy's home, his mother and father have taught Jimmy to say his prayers before going to bed. Sometimes Jimmy forgets unless he is reminded. While Jimmy remembered about his prayers to-night, he was so tired that all he wanted to do was to get into bed. Jimmy paused for a moment and then decided to:

say his prayers even though he was tired ..... ( )
say his prayers as fast as he could since no one would mind ..... ( )
say his prayers so that nothing bad would happen ..... ( )
say his prayers since they were important to him ..... ( )
miss his prayers just this once ..... ( )

When Jimmy was finished he jumped into bed and soon was fast asleep. By his face it was easy to see that Jimmy hoped that there wouldn't be so many decisions to make tomorrow. And that is the story of Jimmy.

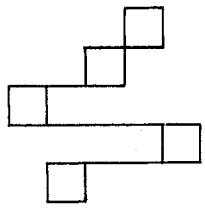
Pupil's Name _____ Age _____ Sex B or

INSTITUTE OF CHILD STUDY SECUI

THE STORY OF JIMMY — Score Sheet #1

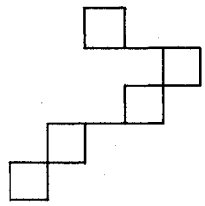
1. sleeping in

DA
IDS
IS
INS
MDS



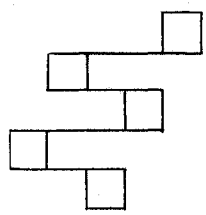
2. at breakfast

IDS
INS
DA
MDS
IS



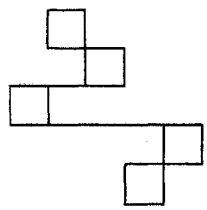
3. forget ball

INS
MDS
DA
IS
IDS



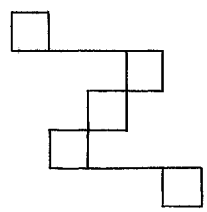
4. arrive late

MDS
IDS
IS
INS
DA



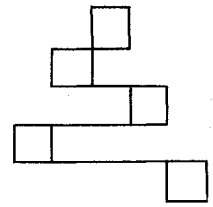
5. arithmetic

IS
DA
IDS
MDS
INS



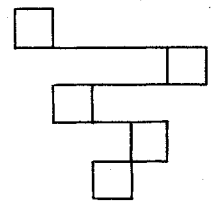
6. book

IDS
MDS
DA
IS
INS



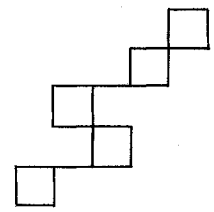
7. playing tag

IS
INS
MDS
DA
IDS



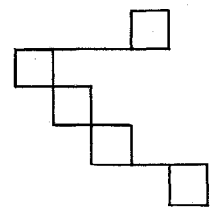
8. at blackboard

INS
DA
MDS
IDS
IS



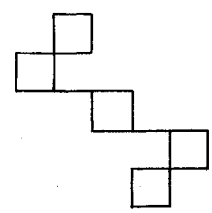
9. consequences

DA
IS
MDS
IDS
INS



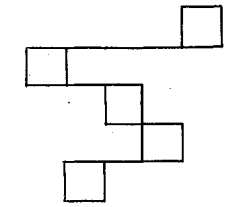
10. reading

MDS
IS
IDS
INS
DA



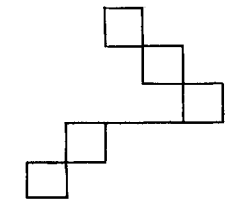
11. making a mask

INS
IS
IDS
DA
MDS



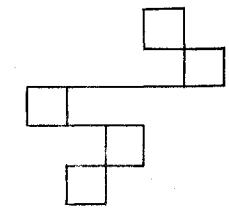
12. fall from fence

IDS
DA
INS
MDS
IS



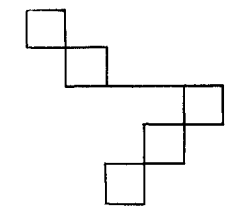
13. money

DA
INS
IS
IDS
MDS



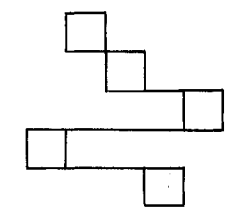
14. homework

IS
MDS
INS
DA
IDS



15. prayers

MDS
IDS
INS
IS
DA



	RANK					
SECURITY CATEGORY	1	2	3	4	5	Total
Independent Security						15
Mature Dependent Security						15
Immature Dep. Security						15
Deputy Agent						15
Insecurity						15
TOTAL	15	15	15	15	15	

School _____ Grade _____ Date of Test _____

'—Elementary Form **SCORING FORM**

THE STORY OF JIMMY — Score Sheet #2

Security Category	Rank 1	2	3	4	5	Consistency Score X	Mean	Y	Y^2	Security Score Z
IS	0	1	4	9	16		45			
MDS	1	0	1	4	9		45			
IDS	4	1	0	1	4		45			
DA	9	4	1	0	1		45			
INS	16	9	4	1	0		45			

225

Total Y^2 _____

Multiply by .044

Consistency Score _____

Percentile _____

Total Z _____

Divide by 6

100 minus _____

Security Score _____

Percentile _____

THE DOMINION TESTS

ACHIEVEMENT TESTS IN SILENT READING

Grades 5 and 6

Cat. No. 820 **TYPE II—DIAGNOSTIC TEST IN PARAGRAPH READING** Form **A**

Name..... (First Name) (Last Name)

Boy or Girl.....Age.....Birthdate..... (Date) (Month) (Year)

Teacher..... Grade..... Today's Date.....

School.....City, Town or Municipality.....

SAMPLE:

Jerry and Joan were on their holidays. Both of them could swim well and they were playing in the water. All at once, Joan felt something catch her by the leg. Jerry had gone under the water and was pulling her down to the bottom of the lake. Then he let go and soon she and her brother Jerry came to the top again. They were out of breath, and their mouths were full of water.

1. **The children were**
   running **sailing** **swimming** **fishing** **rowing**
2. **Joan was pulled under the water by**
   her father **her brother** **the weeds**
   a rope **a big fish**
3. **The best name for this story is**
   A Walk in the Country **A Party** **Learning to Swim**
   Joan Catches a Fish **Playing in the Lake**

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

Analysis of Responses	
Number Correct	.....
Number Omitted	.....
Number Wrong	.....
Grade Level	.....

Analysis of Errors	No.	Level
General Significance	.....	.....
Details	.....	.....
Inference	.....	.....

DEPARTMENT OF EDUCATIONAL RESEARCH
ONTARIO COLLEGE OF EDUCATION
371 BLOOR ST. WEST
TORONTO 5, ONTARIO
No. 820A PRINTED IN CANADA

Have you ever tried soap carving? Or do you, like so many other people, believe that soap is useful only in the kitchen and laundry? Some years ago a large soap manufacturing company held a carving competition, and since then many people of all ages have become keenly interested in the art, and remarkable carvings have been made. In beginning, do not attempt anything too difficult. You will need a fresh cake of white soap, a small kitchen paring knife, tracing patterns, a soft lead pencil, and thin tracing paper. Trace the pattern on the soap, then hold the cake and knife just like an apple you are peeling, and carve towards you. Keep your knife clean and scrape the carving to make it smooth. The finished article may be painted with water colours — do not scrub with the paints or soapsuds will be the result. Put the colour on smoothly and do not hurry. You will be surprised how easy soap carving is, and how many attractive objects you can make.

1. The best name for this story is

How Soap is Painted **How Soap is Used** **A Child's Hobby**
How Soap is Prepared **An Interesting Hobby**

2. The first thing to do is

trace the pattern **clean the knife** **carve towards you**
mix the paints **scrape the carving**

3. The first carving you attempt should not be

too large **too difficult** **too easy** **too simple** **too fancy**

4. All the tools used in soap carving are

made of metal **expensive to buy** **strong**
easy to get **valuable**

GO ON TO PAGE 2

"Doodle-bug" is the funny name someone gave to oil-finding instruments. There are now many kinds of these instruments which are quite difficult to make, but the first one was very simple. It was copied from an instrument first used long ago to try to find the places where water or minerals were hidden underground; and it was called a "divining-rod," because with it a person was supposed to be able to divine or tell where oil was hidden. This rod was made of a forked branch cut from a peach or willow tree, much like a wish-bone in shape. First the point of the rod was dipped into oil, then the two prongs were held one in each hand, letting the oily point stick upwards. The point would appear to twist and jerk, and in some places point down to the earth. These were chosen as the likely spots to drill for oil. Sometimes the drilling was successful and oil was found, but if this happened it was quite by accident. Even modern oil-finding instruments do not have such powers of choosing one spot rather than another spot nearby.

1. **The best name for this story is**

   History of Oil **The Values of Oil** **Searching for Oil**
   Machinery Needs Oil **Drilling an Oil Well**

2. **A divining-rod looks like**

   an oil-can **a fishing rod** **a piece of wire**
   a garden fork **a wish-bone**

3. **People decided to drill where the divining-rod**

   twisted its point down to earth **bent in the middle**
   turned its point straight up **twisted in all directions**
   touched the oil

4. **The divining-rod was really**

   valuable **difficult to make** **useless** **powerful** **necessary**

GO ON TO PAGE 3

Sometimes at night you may see what looks like a bright star shooting across the sky and then disappearing. It often leaves a tail almost like a comet's tail behind it, which fades out in a few seconds. The real name of these "shooting stars" is "meteors." They are not stars at all, they are just bits of rock or iron which have been floating through space and which have suddenly been caught by the pull of our earth's gravitation. When they hit our air and go rushing through it they are moving so fast that the air rubs them into a flame, and they usually burn up before they reach the ground. Once in a while they may be so big that they do not completely burn up but crash to earth and plunge deep down into the ground. When they do this they are called "meteorites." By the time they get to the ground they may not be much bigger than a nut, though sometimes they are large, even as large as a small house. You can see many meteorites in museums.

1. **The best name for this story is**
   Floating Through Space **Why Stars Fall to Earth**
   Meteors and Meteorites **The Sky at Night** **Famous Comets**

2. **Meteors burst into flame because**
   they are floating through space
   they fall to earth **they are like comets**
   they rush through the air **they are made of rock**

3. **Meteorites are different from meteors because**
   they have tails like comets **they are in museums**
   they burn up **they are made of iron** **they fall to earth**

4. **The meteors come towards the earth**
   because the earth attracts them **because they are travelling so fast**
   because they are burning **because of the earth's position**
   because of the earth's movement through space

GO ON TO PAGE 4

Coal became the chief manufacturing fuel about 1800; but before the close of the nineteenth century its place in many industries was challenged by mineral oil or petroleum. Before 1850, mineral oil had been known in small quantities and was used chiefly as a liniment, a rubbing oil for sprains, known as "Seneca Oil." But with the discovery of the first oil well in Western Pennsylvania in 1859, the use of oil for light, heat, and power began. "To strike oil" soon became another word for success — just as a "Ship come home" meant success in the days of the early traders. With the discovery of other oil fields there followed an increase in the number of ways in which oil could be used, and as a result it has now become a very important product in our daily lives. As supplies in the older fields are used up, the great industrial nations have been thinking more and more about the future supply of this greatly needed product. They expect that more will be found in the rich but relatively undeveloped districts of Mexico, Roumania, and Mesopotamia.

1. **The best title for this story is**

   The Discovery of Petroleum **The Loss to Our Coal Mines**
   The Oil Market **The Pennsylvania Oil Wells**
   The Growth in Importance of Oil

2. **The first oil well was discovered in**

   Texas **Roumania** **Mexico** **Alberta** **Pennsylvania**

3. **This story says that the great industrial nations are most interested in**

   the oil districts of Texas **the decline in our coal production**
   the future supply of oil **making liniment from oil**
   new uses for oil

4. **According to this story it is likely that there is a greater quantity of oil in**

   England **Mesopotamia** **Belgium** **Norway** **Pennsylvania**

GO ON TO PAGE 5

Canada as a vacation land has scope and variety not met with elsewhere in the New World. Its greatest charm lies in the differences from the ordinary run of attractions. Canada has not as many of the historic stories that have made Europe and Asia the storehouses of civilization's records from ages before America was discovered, but the four hundred years that have passed since Jacques Cartier first landed on its shores have been filled with stirring events. These are recalled by the habitant life of Quebec, and by the old fortifications, monuments, and historic buildings that are scattered from coast to coast. The tremendous expanse of the country, its variety of physical features, its comparatively thinly scattered population, the ease and speed with which almost all parts can be reached, make the Dominion one of the world's greatest and least crowded playground areas. Tourists can enter at numbers of points along its boundaries by highway, rail, air, or water. Even the most distant hunting and fishing areas can be reached with the help of a guide in a way that does not involve too great hardship.

1. **The best title for this story is**
   The Tourist Trade in Canada — **Canada's Tourist Attractions**
   Canada's Hunting Grounds — **The Fishing Areas of Canada**
   The History of Canada

2. **This story tells us that Canada has**
   many high mountains — **a large number of people**
   a vast amount of territory — **many forest fires**
   very few attractions

3. **Canada delights the traveller most because**
   it has an ancient history — **its attractions differ from the ordinary**
   it is a storehouse of civilization — **it has a large number of guides**
   it has many monuments

4. **Tourists can enter Canada**
   at only one point — **by travelling first to Quebec**
   only by becoming citizens — **only to visit relatives**
   at many points

GO ON TO PAGE 6

We all know that the natives of America are not really Indians. We know that that name was applied to them by Columbus by mistake when he reached these shores and supposed he had found India by sailing west. Then who are they? Scientists generally give us the best answer possible with the evidence they now have, that the ancestors of these American Indians were Mongoloid. This does not mean that these Indians are Chinese nor that they came from China — for the excellent reason that at the supposed period of their arrival in America, China and the Chinese were not yet in existence. Old as they are, the Chinese, by comparison, are recent. It is more nearly true to say that these early Indians probably have ancestors in the far distant past in common with other Asiatic peoples of today. But we do not know what part of Asia was the original home of all these peoples. It was all so very long ago and the various races of mankind—which probably all developed from the same ancestors—have become so different from one another that no one knows what racial mixtures may have occurred during the long ages.

1. **The best name for this story is**
   The Ancestry of the Indians **The Arrival of the Indians**
   The Coming of Columbus **The Chinese and the Indians**
   The People of Asia

2. **This story says that the early Indians probably came from**
   India **China** **Asia** **America** **Egypt**

3. **Scientists say that the racial origin of the Indians is**
   American **Mongoloid** **Chinese** **Anglo-Saxon** **Japanese**

4. **This story tells us that the various races of mankind passed through periods during which they have become**
   more alike **mixed and alike** **unlike and unmixed**
   mixed and less alike **just like their common ancestors**

GO ON TO PAGE 7

The tourist who has made the St. Lawrence River trip will not soon forget the thrill aroused by the sight of Quebec City from the river. This city is the capital of the Province and in it we can find evidence of all the daring deeds surrounding the struggle for the possession of British North America in the eighteenth century. Lanes paved with cobblestones, winding stairway streets, old houses, and fortifications combine with the modern in Quebec. A short distance below the city are the famous Falls of the Montmorency River, and a few miles above the city is one of the amazing engineering triumphs of man —the Quebec Bridge. Its central ironwork span curves one hundred and seventy feet above the water. Both trains and automobiles can cross the bridge. The waters narrow considerably after Quebec City is passed but the river is still one of noble proportions. Cathedral spires and church towers bear witness to the importance of religion in the daily lives of the inhabitants.

1. The best title for this story is

A City in Quebec **A Canadian City** **The Capital of Quebec**
The Cathedrals of Quebec City **A View of Quebec City**

2. This story says that Quebec City

contains many factories **has large proportions**
combines the old and the new **has wide streets**
is an engineering triumph

3. This story tells us that the people of Quebec City

spend most of their time in churches **never go to church**
are religious **like to make spires** **are a lively people**

4. This story tells us that the Quebec Bridge

was very difficult to build **is the largest in the world**
was made by the first settlers
was made by Montmorency **is built over the city**

END OF TEST

LOOK OVER YOUR WORK

No. Right _____

G Score _____

M A _____

C A _____

I Q _____

NON-LANGUAGE MULTI-MENTAL TEST

Form A

by

E. L. TERMAN, Ph. D.
WM. A. McCALL, Ph. D.
IRVING LORGE, Ph. D.

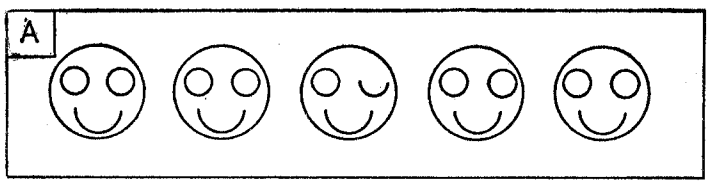
Fill the following blanks

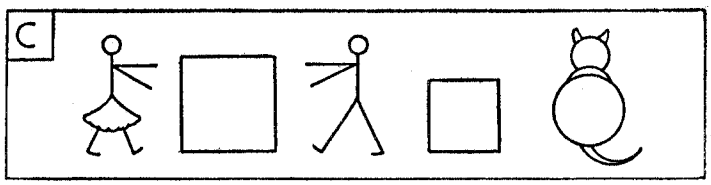
My name is _____ (Last) _____ (First) _____ (Middle)

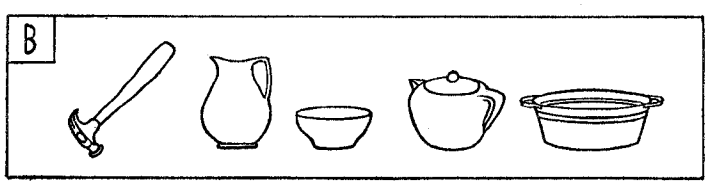
I was born _____ (Month) _____ (Day) _____ (Year)

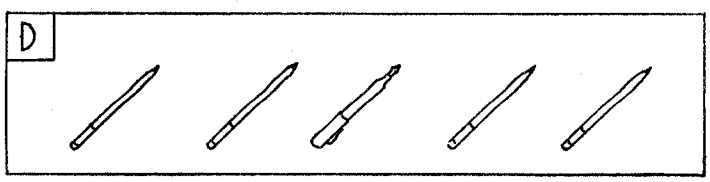
I am in _____ (City) _____ (School) _____ (Grade)

In the first box there are five drawings. One drawing does not belong with the other four. Put a large X on the one that does not belong. Do the same for the other three boxes. Then turn the page. Do the same for all the boxes on the next pages. Take all the time you need.









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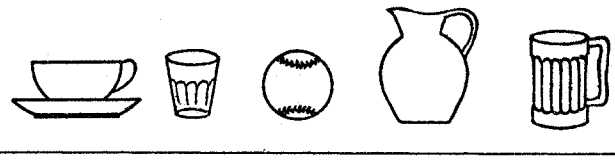

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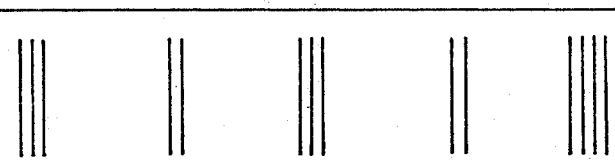

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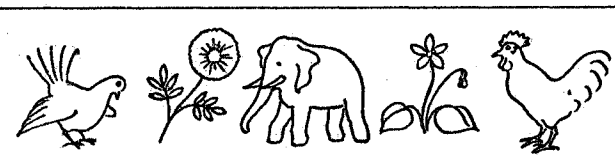

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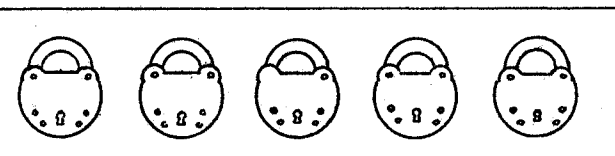

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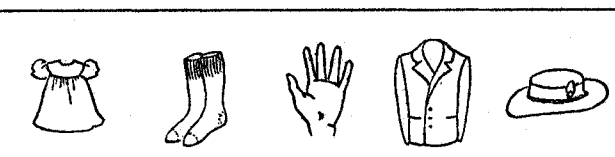

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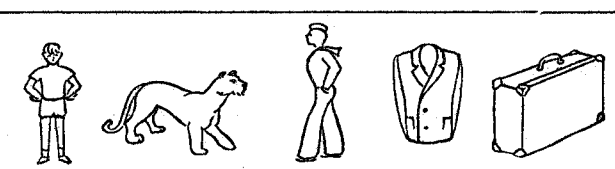

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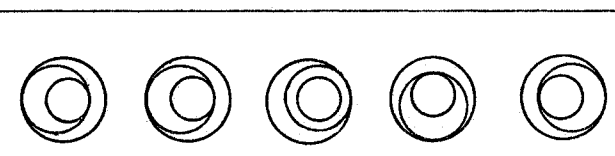

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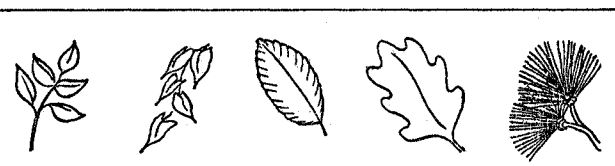

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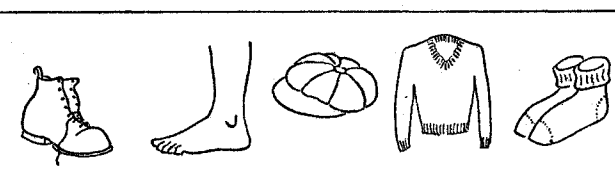

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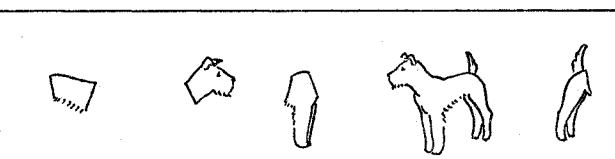

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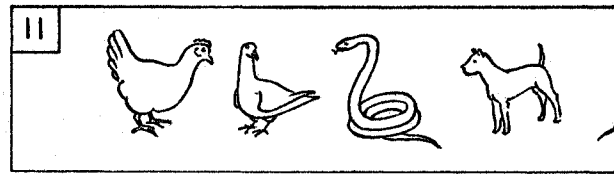

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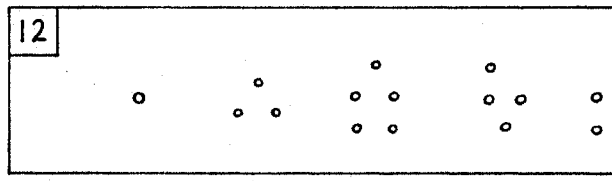

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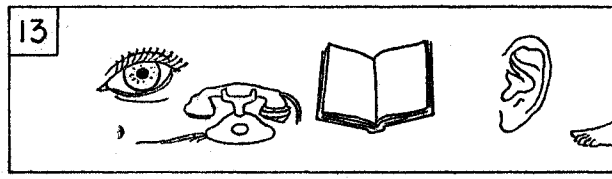

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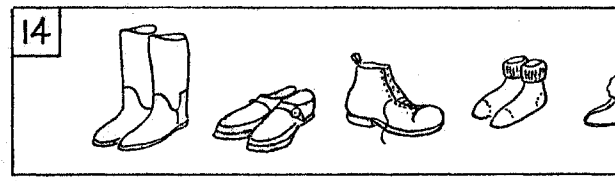

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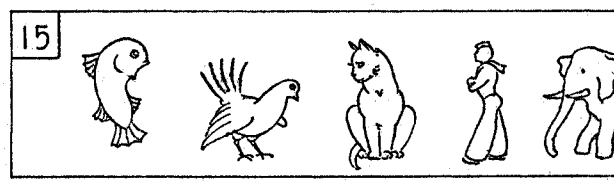

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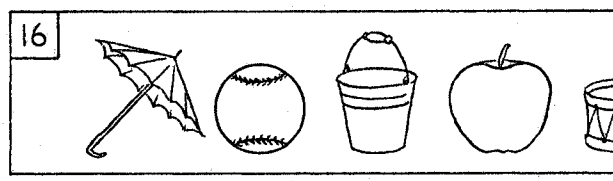

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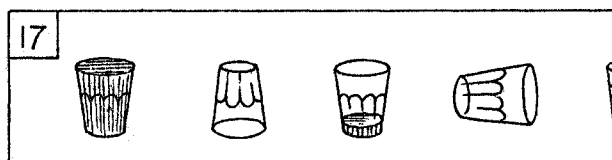

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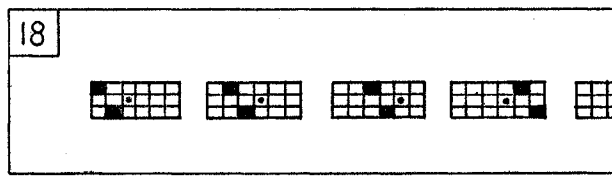

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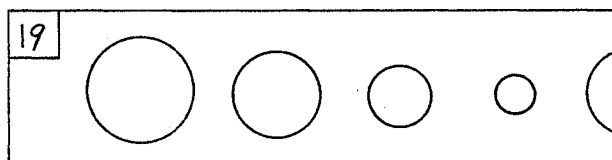

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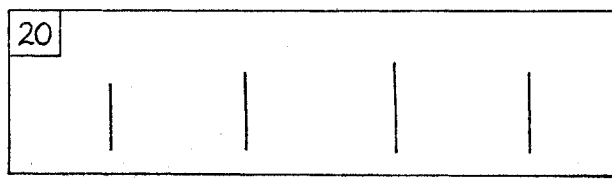

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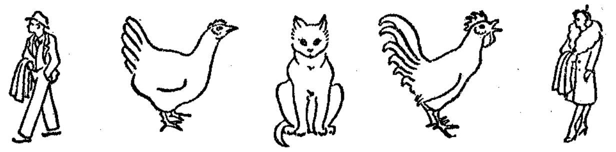

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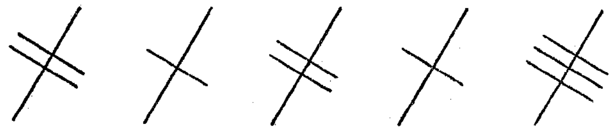

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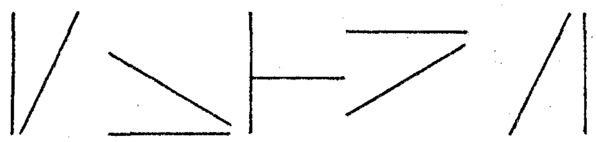

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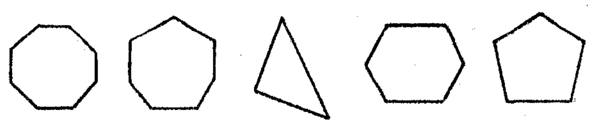

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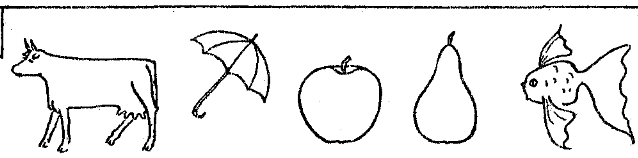

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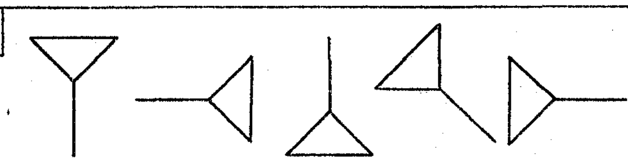

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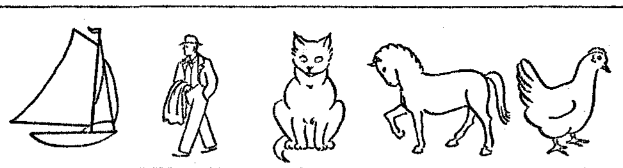

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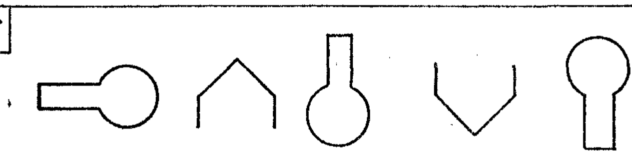

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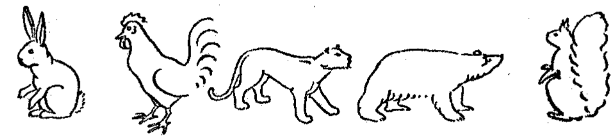

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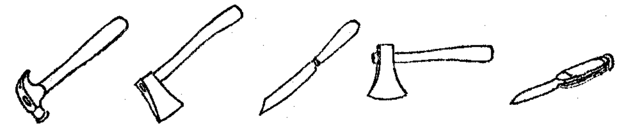

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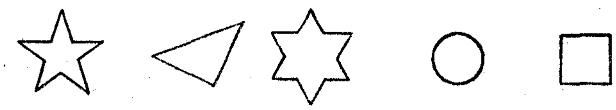

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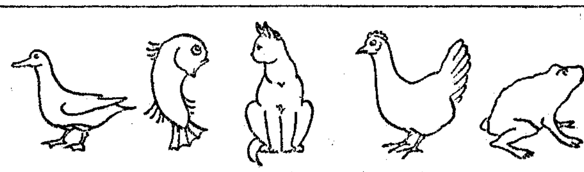

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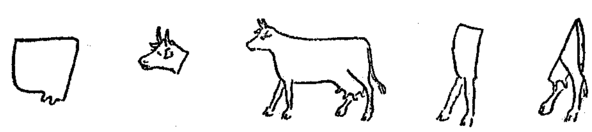

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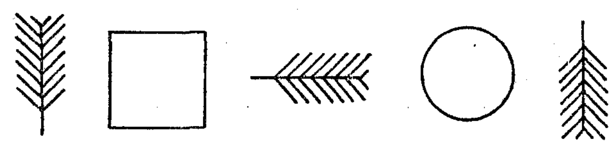

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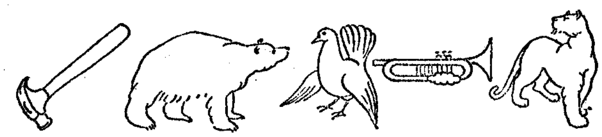

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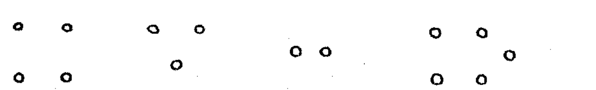

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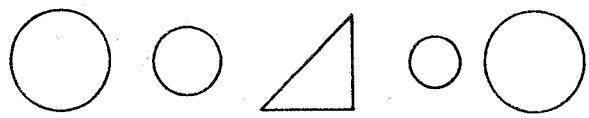

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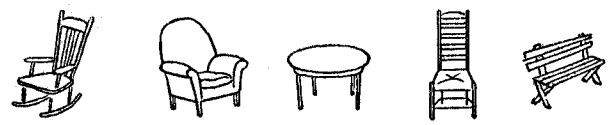

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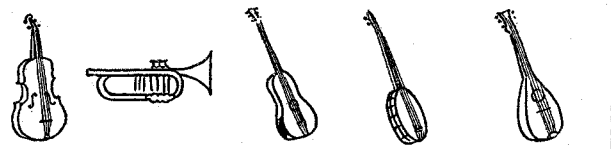

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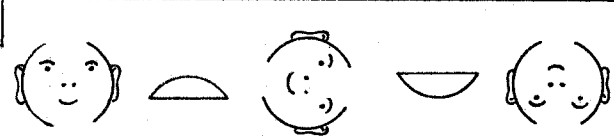

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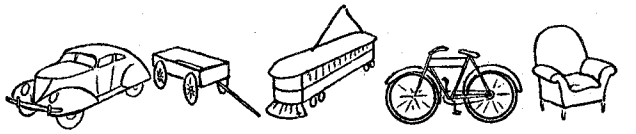

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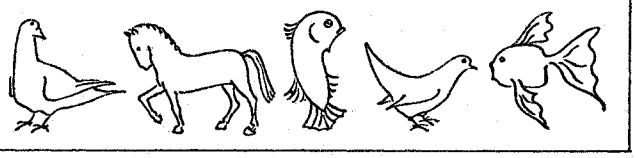

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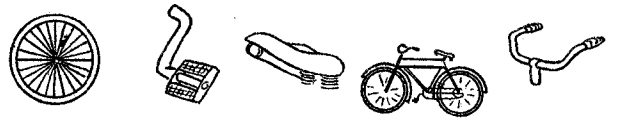

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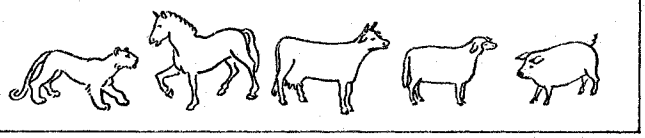

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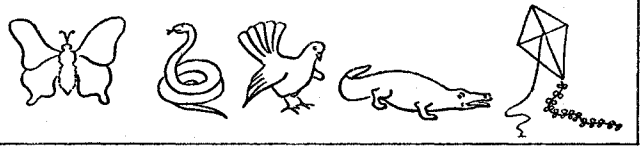

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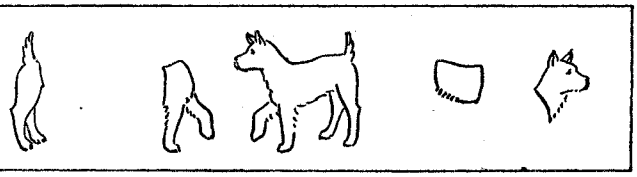

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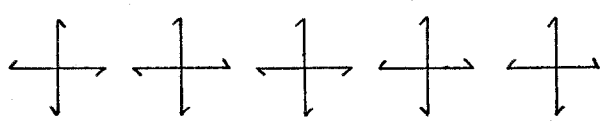


TEACHER'S ESTIMATE OF THE CHILD'S SECURITY

Dear .....

We would appreciate it if you would indicate what in your opinion is the level of security of the children listed on the attached page.

Note carefully the precise meaning of each of the five levels of security.

In general the concept of security is defined as "the child's willingness to accept the consequences of his decisions and actions." The child's level can most readily be observed in the way he responds to failure or in the way he behaves when difficulties hinder him from attaining his goal.

The particular levels of security are defined as follows:

IS: INDEPENDENT SECURITY: The ability to complete an activity and the willingness to accept one's own decisions, actions and consequences in the performance of the activity. For example, the child, who climbs on his bicycle and succeeds in manoeuvring the bicycle ahead, is independently secure in terms of activity. As long as his performance level meets his desired level of achievement he remains independently secure.

MDS: MATURE DEPENDENT SECURITY: The willingness to share with another child in the performing of an activity together with a willingness to mutually accept the consequences of the decisions and actions. For example, the child who chooses to make a snowman with another child (or group of children) must be willing to share in accepting whatever success or failure results from their efforts.

IDS: IMMATURE DEPENDENT SECURITY: To wait for or expect help in completing a task or performing an activity. For example, the child who waits to be told what to do with his play things, or who expects the adult to make the kite for him.

DA: DEPUTY AGENT: The avoiding of consequences by means of some psychological shuffle. For example, the child who places the blame for his failure or inadequacy on someone else, or who makes excuses for himself, or who adopts the sour grapes attitude.

INS: INSECURITY: The lack of skill necessary to deal with some activity which causes indecision, hesitation and anxiety. For example, the child who cannot do his arithmetic problems and broods over his inability or who waits in despair without any attempt to succeed.

For the following children indicate your estimate of the level of security of each as observed (a) in the classroom, (b) on the playground.

....

Classroom:	Independent security	Mature dependent security	Immature dependent security	Deputy agent	Insecurity
Playground:					

....

Classroom:	Independent security	Mature dependent security	Immature dependent security	Deputy agent	Insecurity
Playground:					

....

Classroom:	Independent security	Mature dependent security	Immature dependent security	Deputy agent	Insecurity
Playground:					

Elementary • GRADES 4·5·6·7·8 • 1957 S-Form

California Short-Form Test of Mental Maturity

Devised by

ELIZABETH T. SULLIVAN, WILLIS W. CLARK, AND ERNEST W. TIEGS

E

S-57

INSTRUCTIONS TO PUPILS:

This is a test of mental maturity. In taking it you will show how well you understand relationships and what you do when you face new problems. No one is expected to do the whole test correctly, but you should answer as many items as you can. Work as fast as you can without making mistakes.

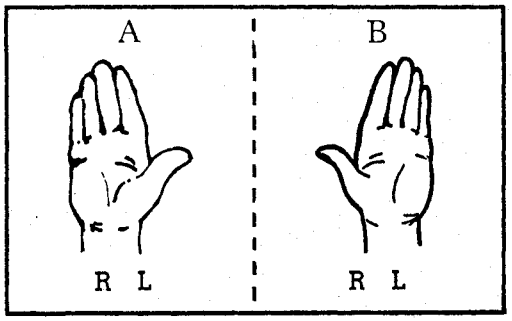
DO NOT WRITE OR MARK ON THIS TEST BOOKLET UNLESS TOLD TO DO SO BY THE EXAMINER.

15th Printing

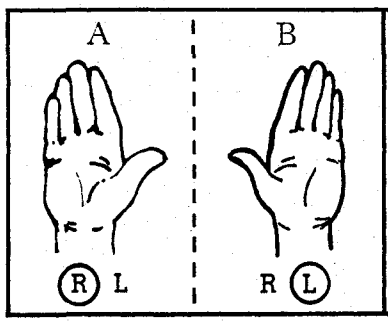
PUBLISHED BY CALIFORNIA TEST BUREAU, DEL MONTE RESEARCH PARK, MONTEREY, CALIFORNIA
BRANCH OFFICES: NEW CUMBERLAND, PA.; MADISON, WIS.; DALLAS, TEXAS

DIRECTIONS: Mark as you are told the letter, R, for each right hand or foot; mark the letter, L, for each left hand or foot.

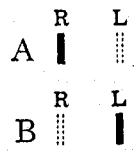
Samples A and B



Correct Test Booklet Marks



Correct Answer Sheet Marks

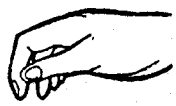


TEST 1

1  R L

2  R L

3  R L

4  R L

5  R L

6  R L

7  R L

8  R L

9  R L

10  R L

11  R L

12  R L

13  R L

14  R L

15  R L

16  R L

17  R L

18  R L

19  R L

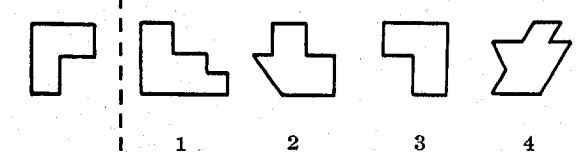
20  R L

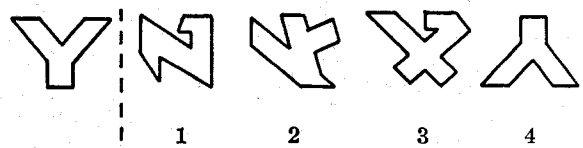
STOP NOW WAIT FOR FURTHER INSTRUCTIONS

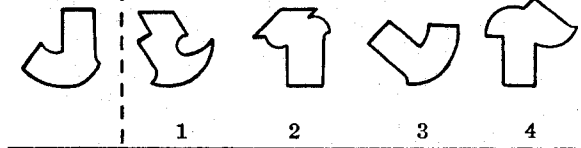
Test 1 Score (number right).....

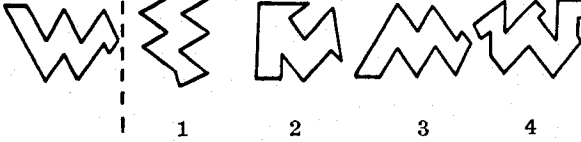
DIRECTIONS: In each row find the drawing that is a different view of the first drawing. Mark its number as you are told.

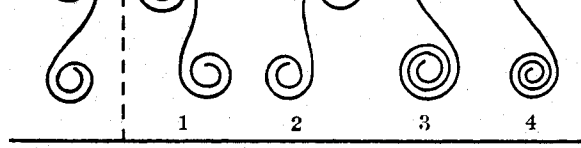
TEST 2

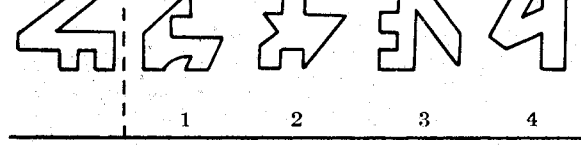
C  1 2 3 4 ___C

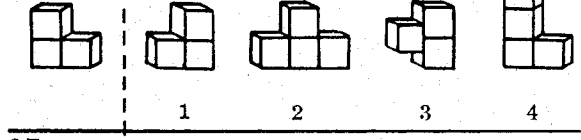
21  1 2 3 4 ___21

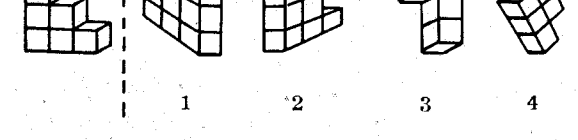
22  1 2 3 4 ___22

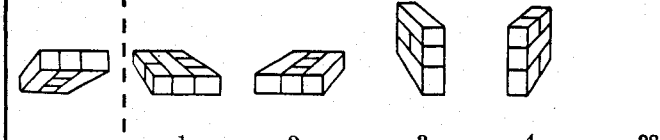
23  1 2 3 4 ___23

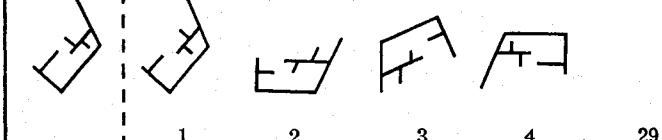
24  1 2 3 4 ___24

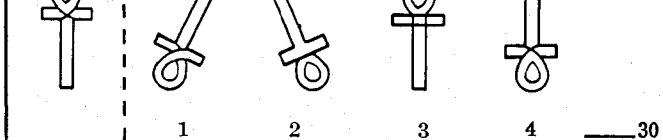
25  1 2 3 4 ___25

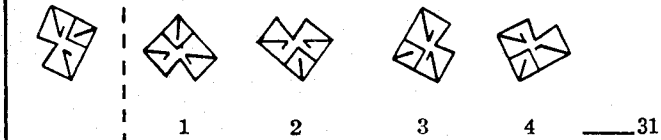
26  1 2 3 4 ___26

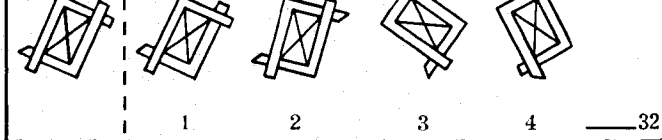
27  1 2 3 4 ___27

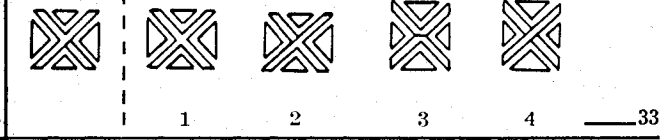
28  1 2 3 4 ___28

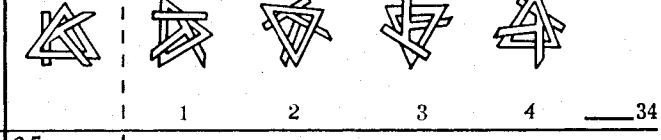
29  1 2 3 4 ___29

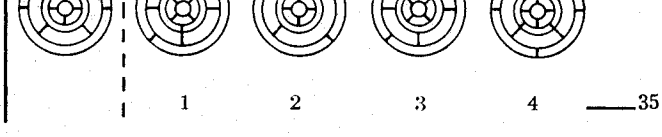
30  1 2 3 4 ___30

31  1 2 3 4 ___31

32  1 2 3 4 ___32

33  1 2 3 4 ___33

34  1 2 3 4 ___34

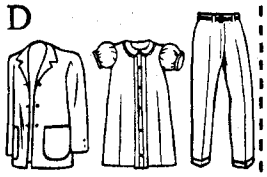
35  1 2 3 4 ___35

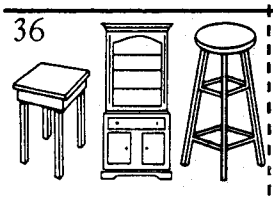
STOP NOW WAIT FOR FURTHER INSTRUCTIONS

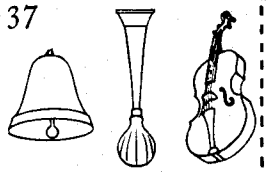
Test 2 Score
(number right).....

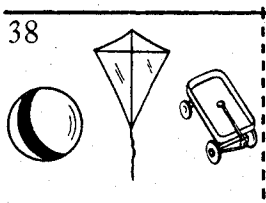
DIRECTIONS: The first three pictures in each row are alike in some way. Decide how they are alike, and then find the one picture among the four to the right of the dotted line that is most like them and mark its number.

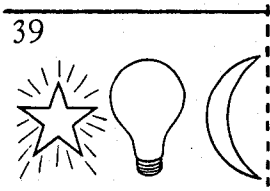
TEST 3

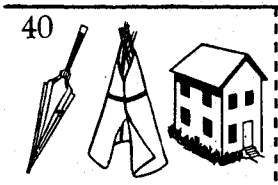
D  1 2 3 4 ___D

36  1 2 3 4 ___36

37  1 2 3 4 ___37

38  1 2 3 4 ___38

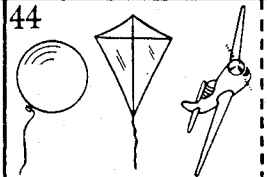
39  1 2 3 4 ___39

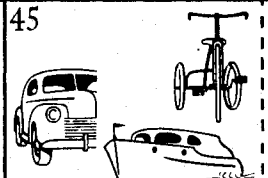
40  1 2 3 4 ___40

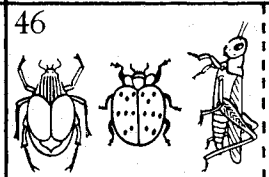
41  1 2 3 4 ___41

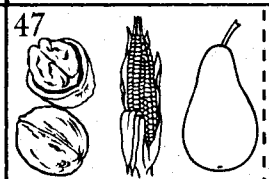
42  1 2 3 4 ___42

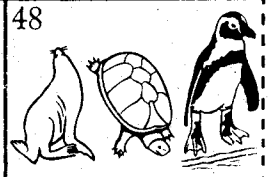
43  1 2 3 4 ___43

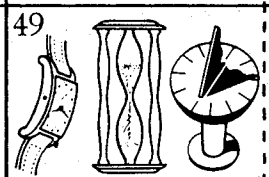
44  1 2 3 4 ___44

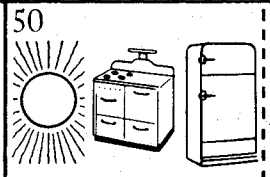
45  1 2 3 4 ___45

46  1 2 3 4 ___46

47  1 2 3 4 ___47

48  1 2 3 4 ___48

49  1 2 3 4 ___49

50  1 2 3 4 ___50

STOP

Test 3 Score
(number right) .....

DIRECTIONS: Read each group of statements below and the conclusions which follow. Then mark as you are told the number of each answer you have decided is correct.

TEST 4

E. If the sun shines it is day.

The sun shines.

Therefore

1 It will not rain
2 It is day
3 The moon may shine tonight ——E

51. All four-footed creatures are animals.

All horses are four-footed.

Therefore

1 Creatures other than horses can walk
2 All horses can walk
3 All horses are animals ——51

52. Either the sun moves around the earth or the earth moves around the sun.

But the sun does not move around the earth.

Therefore

1 The earth moves around the moon
2 The earth moves around the sun
3 The sun is larger than the earth ——52

53. Jack runs faster than Harry.

Bert runs faster than Harry.

Which is the slowest of the three?

1 Bert
2 Jack
3 Harry ——53

54. Jane is taller than Helen.

Helen is taller than Barbara.

Which is the tallest: Jane, Helen, or Barbara?

1 Helen
2 Jane
3 Barbara ——54

55. All mammals are vertebrates.

The cow is a mammal.

Therefore

1 Some vertebrates live on land
2 Some mammals live in water
3 The cow is a vertebrate ——55

56. A is either B or C.

A is not C.

Therefore

1 A is not B
2 A is B
3 C is B ——56

57. Either your cousin is older than you, or the same age, or younger.

But your cousin is not older, nor is he younger.

Therefore

1 Your cousin is younger than you
2 Your cousin is older than you
3 Your cousin is the same age as you ——57

GO RIGHT ON TO THE NEXT PAGE

58. All circles are round figures.

A certain figure is not round.

Therefore

1 It is not a circle
2 It is oval
3 It is either a square or a triangle ____58

59. At normal temperatures, all metals except mercury are solids.

Gold is a metal.

Therefore

1 Gold is valuable
2 Gold is a solid
3 Metals are usually heavy ____59

60. Some fishes fly.

No birds are fishes.

Therefore

1 All creatures that fly are fishes or birds
2 No fishes resemble birds
3 Creatures other than birds can fly ____60

61. Three boys are up on a ladder.

Tom is farther up the ladder than Paul.

Jim is farther up than Tom.

Which boy is in the middle position on the ladder?

1 Tom
2 Paul
3 Jim ____61

62. George Washington was a skillful general.

George Washington was President of the United States.

Therefore

1 Skillful generals make good presidents
2 One President of the United States was a skillful general
3 Good presidents make skillful generals ____62

63. A is situated to the east of B.

B is situated to the east of C.

Therefore

1 C is situated close to A
2 A is situated to the east of C
3 C is nearer to A than to B ____63

64. He is either honest or dishonest.

But he is not dishonest.

Therefore

1 He is desirable for a position
2 He comes from honest people
3 He is honest ____64

65. A is equal to B.

B is equal to C.

Therefore

1 B is larger than C
2 A is equal to C
3 A is equal to B plus C ____65

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Test 4 Score (number right).....

DIRECTIONS: In each row of numbers below, there is one that does not belong. Find the number that should be omitted from each row among the answer numbers on the right, and mark its letter as you are told.

TEST 5

F. 2 4 6 8 9 10 12 14 — a 8 b 9 c 10 d 12 e 14 ____F

(66). 5 10 15 20 22 25 30 — a 5 b 10 c 15 d 20 e 22 ____66

(67). 18 15 13 12 9 6 3 — a 15 b 13 c 12 d 9 e 3 ____67

(68). 2 5 8 10 11 14 17 — a 5 b 8 c 10 d 11 e 17 ____68

(69). 1 2 4 8 14 16 32 — a 2 b 4 c 8 d 14 e 16 ____69

(70). 27 9 3 1 0 ⅓ — a 9 b 3 c 1 d 0 e ⅓ ____70

(71). 3 4 7 8 10 11 12 15 — a 7 b 10 c 11 d 12 e 15 ____71

(72). 3 9 27 76 81 243 — a 9 b 27 c 76 d 81 e 243 ____72

(73). 25 24 22 19 18 16 13 12 9 10 7 — a 25 b 22 c 19 d 13 e 9 ____73

(74). 1 2 4 7 11 15 16 22 29 37 — a 15 b 16 c 22 d 29 e 37 ____74

(75). 12.5 11.4 10.3 9.8 9.2 8.1 7.0 — a 11.4 b 9.8 c 9.2 d 8.1 e 7.0 ____75

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Test 5 Score
(number right).....

DIRECTIONS: Work these problems on a sheet of scratch paper. Mark as you are told the letter of each correct answer.

TEST 6

G. There are 5 birds in a tree and 3 birds on a fence. How many birds are there in both places?

a 2
b 8
c 15
d 7 ——G

---

76. Tom has 5 marbles. Bob has 4 marbles. Bill has 3 marbles. How many marbles do all three boys have?

a 1
b 2
c 12
d 60 ——76

---

77. Tickets to a show cost 10 cents. Jim bought 2 tickets. How much did he pay for them?

a 20¢
b 2¢
c 12¢
d 8¢ ——77

---

78. Ben earns 4 dollars each week helping his father after school. He has earned 16 dollars. How many weeks has he been working?

a 20
b 64
c $4
d 4 ——78

---

79. Seventy girl scouts were divided into 5 groups of equal size. How many girls were there in each group?

a 15
b 14
c 20
d 3 ——79

---

80. How many marbles can you buy for 25 cents at the rate of 3 for 5 cents?

a 15
b 75
c 33
d 40 ——80

---

81. Two boys bought watermelons and sold slices of them at a ball game. They had 50 cents in the cash box to start with. They sold 40 slices of melon at 5 cents a slice. How much should they have in the cash box at the end of the day?

a $2.00
b 80¢
c $3.00
d $2.50 ——81

---

82. Balls which usually sold for 65 cents were sold for a short time for 25 cents less. Frank bought a ball at the lower price and gave the clerk 50 cents. How much change should he get back?

a 25¢
b 20¢
c 10¢
d 5¢ ——82

GO RIGHT ON TO THE NEXT PAGE

83. At Camp No. 9 it took 10 boy scouts 3 days to set up camp. Camp No. 12, which is the same size, must be set up in one day. How many boys will be needed to do the work?

a 3
b 30
c 27
d 13 ____83

---

84. George lives one-fourth of a mile from school. He goes home at noon for lunch. How far does he walk each day going to and from school?

a ½ mi.
b 1 mi.
c ¾ mi.
d 1½ mi. ____84

---

85. A newsboy delivered papers to 30 customers for a month. At the end of the month he collected $15.00. How much did each customer pay?

a 50¢
b $2.00
c 5¢
d $5.00 ____85

---

86. There are 20 girls in the Sunday School class. Each week each girl gives 5 cents to go toward a fund for needy families. How much will all the girls give in 5 weeks?

a $1.00
b 25¢
c $5.00
d $7.50 ____86

---

87. Richard saw an air rifle advertised for $21.00 at one-third off for cash. How much money will he need to buy it?

a $14.00
b $7.00
c $18.00
d $9.00 ____87

---

88. How much will your mother have to pay for the cleaning of a rug 9 ft. wide and 12 ft. long at the rate of 20 cents a square foot?

a $8.40
b $1.08
c $4.20
d $21.60 ____88

---

89. In a field meet, 20 events were listed for the day. Pupils from your school won 60 per cent of the events. How many events did you lose?

a 4
b 3
c 8
d 12 ____89

---

90. A swimming pool is 60 ft. long and 30 ft. wide. The water in the pool is 4 ft. deep on the average. How long will it take to fill the pool if the water runs in at the rate of 90 cubic feet a minute?

a 80 min.
b 5 min.
c 26 min.
d 45 min. ____90

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Test 6 Score
(number right).....

DIRECTIONS: Mark as you are told the number of the word that means the same or about the same as the first word.

TEST 7

H. **blossom** [1] tree [2] vine [3] flower [4] garden ____ H

91. **journey** [1] state [2] travel [3] end [4] fair ____ 91

92. **law** [1] rule [2] power [3] able [4] help ____ 92

93. **always** [1] larger [2] forever [3] know [4] apart ____ 93

94. **almost** [1] rarely [2] never [3] now [4] nearly ____ 94

95. **alarm** [1] blame [2] signal [3] address [4] comfort ____ 95

96. **damage** [1] manage [2] collect [3] injure [4] recover ____ 96

97. **announce** [1] keep [2] publish [3] reform [4] destroy ____ 97

98. **improve** [1] make [2] better [3] satisfy [4] admit ____ 98

99. **difficult** [1] different [2] pleasant [3] hard [4] task ____ 99

100. **despair** [1] mind [2] time [3] past [4] hopelessness ____100

101. **consent** [1] occur [2] offer [3] oppose [4] agree ____101

102. **portion** [1] collect [2] part [3] make [4] refer ____102

103. **amuse** [1] afford [2] gift [3] game [4] please ____103

104. **lack** [1] use [2] want [3] admit [4] apart ____104

105. **cease** [1] consent [2] concert [3] stop [4] strain ____105

106. **disguise** [1] reveal [2] declare [3] show [4] mask ____106

107. **distinct** [1] success [2] clear [3] interest [4] noticed ____107

108. **sincere** [1] satisfactory [2] genuine [3] hopeful [4] noble ____108

109. **lofty** [1] tone [2] high [3] example [4] toil ____109

110. **extend** [1] refuse [2] remain [3] lengthen [4] revert ____110

111. **condemn** [1] false [2] blame [3] oppose [4] alarm ____111

112. **humble** [1] secure [2] dwelling [3] lowly [4] proud ____112

113. **expert** [1] average [2] master [3] business [4] student ____113

114. **apply** [1] piece [2] use [3] correct [4] mean ____114

115. **legal** [1] lawful [2] court [3] lawyer [4] humane ____115

116. **endeavor** [1] help [2] hero [3] attempt [4] harm ____116

117. **conclusion** [1] settlement [2] end [3] journey [4] right ____117

118. **obscure** [1] clear [2] hidden [3] odd [4] quaint ____118

119. **extraordinary** [1] loud [2] unusual [3] particular [4] favorable ____119

120. **location** [1] relieve [2] choice [3] view [4] situation ____120

121. **imaginary** [1] existing [2] trifling [3] unreal [4] substantial ____121

122. **escort** [1] avoid [2] occasion [3] attend [4] remain ____122

123. **merit** [1] deserve [2] merry [3] desire [4] just ____123

124. **compile** [1] aid [2] ample [3] collect [4] answer ____124

125. **console** [1] empower [2] reduce [3] order [4] comfort ____125

126. **legislator** [1] elector [2] lawmaker [3] minor [4] citizen ____126

127. **revert** [1] persist [2] perplex [3] return [4] unknown ____127

128. **significance** [1] prevention [2] age [3] meaning [4] certainty ____128

129. **petulant** [1] oppressive [2] stagnant [3] sprightly [4] peevish ____129

130. **dispute** [1] disturb [2] question [3] subdue [4] disguise ____130

131. **deplete** [1] complete [2] final [3] exhaust [4] fearless ____131

132. **compassionate** [1] sly [2] free [3] respectful [4] kind ____132

133. **deter** [1] meddle [2] applaud [3] hinder [4] recline ____133

134. **complex** [1] simple [2] compliment [3] complexion [4] mixed ____134

135. **dispatch** [1] discount [2] mood [3] relieve [4] haste ____135

136. **venerable** [1] adequate [2] aged [3] youthful [4] reliable ____136

137. **conceited** [1] variable [2] connected [3] vain [4] conquest ____137

138. **malign** [1] insure [2] slander [3] muffle [4] invade ____138

139. **facile** [1] fragile [2] futile [3] easy [4] remote ____139

140. **empower** [1] enlarge [2] permit [3] surpass [4] indulge ____140

STOP

Test 7 Score (number right) .....

®California Short-Form Test of Mental Maturity

Elementary · GRADES 4-5-6-7-8 · '57 S-Form

DEVISED BY E. T. SULLIVAN, W. W. CLARK, AND E. W. TIEGS

Name ..... Grade ..... (Circle one) Boy Girl
Last First Middle

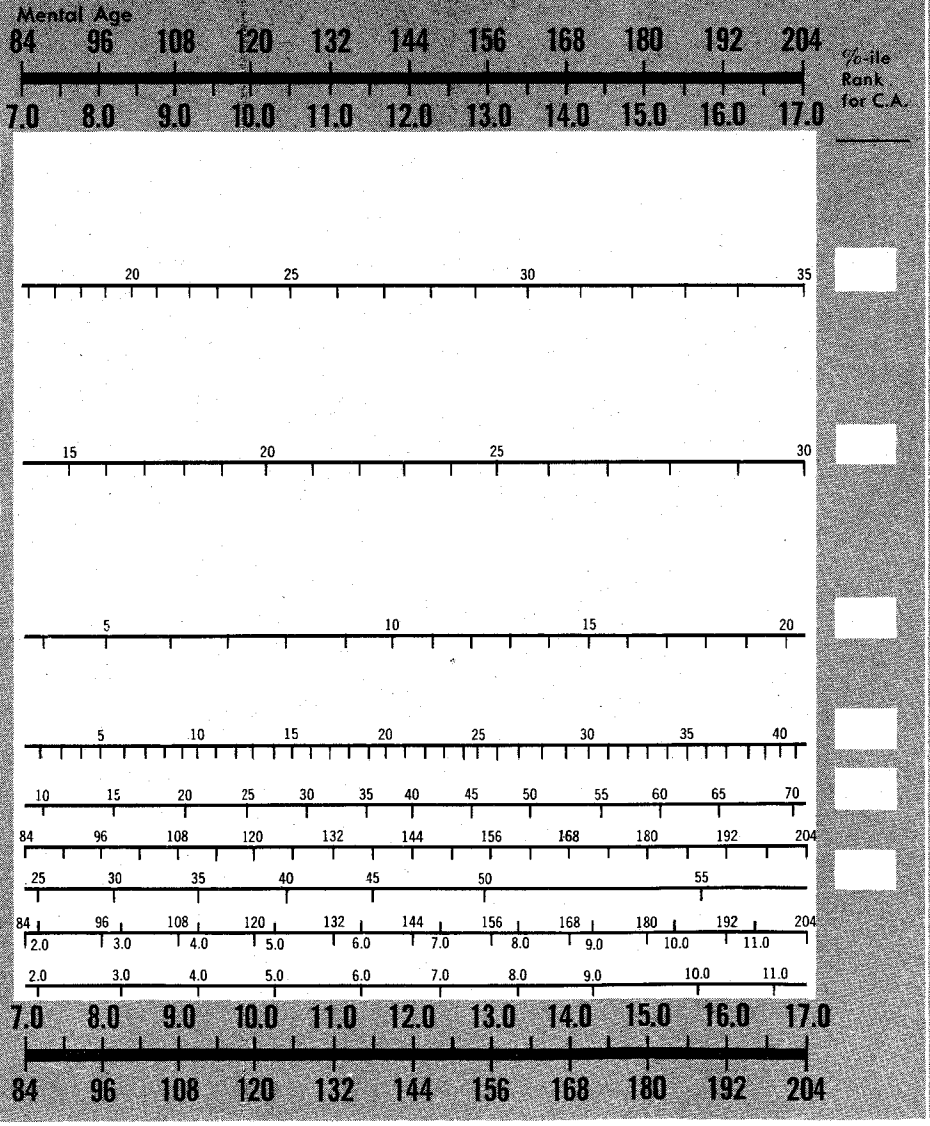
School ..... City ..... Date of Test .....
Month Day Year

Teacher or Examiner ..... ( ) Pupil's Age ..... Date of Birth .....
Month Day Year

See MANUAL for instructions.

Factor	Test	Possible Score	Pupil's Score L	Pupil's Score NL
SPATIAL RELATIONSHIPS	1. Sensing Right and Left	20		
	2. Manipulation of Areas	15		
	TOTAL (1 + 2)	35		
LOGICAL REASONING	3. Similarities	15		
	4. Inference	15		
	TOTAL (3 + 4)	30		
NUMERICAL REASONING	5. Number Series	10		
	6. Numerical Quantity	15		
	TOTAL (5 + 6)	25		
VERBAL CONCEPTS	7. VERBAL CONCEPTS	50		
	TOTAL (7)	50		
	LANGUAGE DATA	80		
	MENTAL AGE			
	NON-LANGUAGE DATA	60		
	CHRONOLOGICAL AGE			
	Average Grade Placement Equivalent			
	INTELL. (M. A.) GRADE PLACEMENT			

DIAGNOSTIC PROFILE (Chart Pupil's Scores Here)



SUMMARY OF DATA

	LANGUAGE DATA	NON-LANG. DATA	TOTAL DATA L + NL / 2
SCORE			
M.A. divided by C.A. equals I.Q.*			
INTELL. (M. A.) G. P.			

*Shift decimal two places to the right before recording.

For comparison and prediction, use I.Q. percentile norms in table entitled "I.Q.'s for Various Populations" in Part 4 of the Manual.

	LANG. I.Q.	NON-LANG. I.Q.	TOTAL I.Q.
Normal Population			
9th Grade			
10th Grade			
11th Grade			
12th Grade			
College Freshmen			
College Sophomores			
College Graduates			

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VITA AUCTORIS

1933 Born at Humboldt, Saskatchewan, to Henry J. Brockman and Agnes Gieselman, on October 27, 1933. Educated at Ursuline Academy, Bruno, Saskatchewan.

1953 B.A. in social sciences from the University of Saskatchewan.

1957 Elementary Teacher's Certificate from Ontario Teachers' College, Toronto.

1960 - Registered as a full-time graduate student in Psychology at Assumption University of Windsor.