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## College accounting testing program bulletin no. 4; Results of orientation test in schools of business of fifty colleges, fall semester 1947

American Institute of Accountants. Committee on Selection of Personnel

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THE AMERICAN INSTITUTE OF ACCOUNTANTS  
COLLEGE ACCOUNTING TESTING PROGRAM

Bulletin No. 4

RESULTS OF ORIENTATION TEST IN SCHOOLS OF BUSINESS  
OF FIFTY COLLEGES

Fall Semester, 1947

Prepared by  
Committee on Selection of Personnel  
437 West 59th Street  
New York 19, N. Y.

January, 1948

*21 Audubon Ave*

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Marquette University	Wayne University
Miami University	West Virginia Wesleyan College
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Mississippi State College	University of Wisconsin

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## INTRODUCTION

The fall, 1947, college accounting testing program was the third testing program carried on with tests constructed under the direction of the Committee on Selection of Personnel of the American Institute of Accountants. Work on this project was begun in 1943, and a large amount of experimental testing was conducted with the cooperation of colleges and accounting firms in 1944 and 1945. The Orientation Test, Form A, was used as the basis of a testing program in the colleges in the fall of 1946, and orientation, achievement, and interest tests were employed in a more extensive testing program in the spring of 1947. Data concerning the results of the tests given during the college year, 1946-47, as well as other information relative to the project, can be found in Bulletins Nos. 1, 2, 2A, and 3 published by the committee and in other items in the bibliography at the end of this bulletin.

The Orientation Test is designed to measure general aptitude for the study of accounting. The test contains three parts, vocabulary, reading comprehension, and arithmetic problems in the field of business. The results on the first two parts are combined to form a verbal score, and the last part yields a numerical score. Total scores, as well as verbal and numerical scores, are reported for all individuals and groups. The tests exist in two forms, A and B. The overall working time for each form is fifty minutes.

Both Form A and Form B of the Orientation Test were used in the fall, 1947, program. Form A had been used in the fall of 1946 and Form B in the spring of 1947. The usual procedure in filling orders from institutions that had previously used the Orientation Test was to send the form which had not been used by a given institution or, in case both had been used, to send the less recently used form. Central scoring in the project offices was made available, but local scoring was permitted with the proviso that all tests were to be returned to the central office for use in research and the improvement of norms on the test. All local scoring was sample checked to insure accuracy, and where the original scoring did not meet acceptable standards, complete rescoring was done before the results were included in the norms.

Several institutions cooperated, on special request, by administering Achievement Tests to their students and returning the test papers to be used in research and statistical analysis of these new tests. Distributions of the scores resulting from the experimental use of the Achievement Tests, as well as the distributions on the Orientation Test, are summarized in this bulletin. More than 17,000 accounting students distributed among fifty colleges and universities took the Orientation Test this fall. Approximately 16,000 of these students were starting their first year of accounting. It is probable at this level that the Orientation Test is particularly useful. There is obviously great advantage to both colleges and students in the use of procedures to identify early those individuals who have promise for the study of accounting and those who should perhaps be guided into preparation for some other field. A continuing research program is being carried on under the direction of the committee to establish the validity of the Orientation Test, as well as that of the Achievement Tests and the interest test for the prediction of success in accounting courses in colleges.

### Summary of Test Results

Distributions of the verbal, quantitative, and total raw scores on the Orientation Test in first-year accounting courses are shown in Table I, and the corresponding distributions for the second and third years of study are presented in Table II. There are one hundred possible raw score points in the verbal part, thirty in the quantitative part, and one hundred and thirty in the entire test. It will be observed that on both forms the range of quantitative scores of the first-year group covers the entire possible range from 0 to 30. The range of verbal scores covers almost the entire possible range, although none of the more than 16,000 students obtained a perfect verbal score. The total scores range from 1 to 123 on Form A and from 0 to 120 on Form B. There is obviously a tremendous range. The range is somewhat, although not greatly, less at the combined second- and third-year levels.

The data in Tables I and II indicate that Forms A and B are rather closely similar in difficulty, but Form B is slightly easier in both verbal and quantitative score. Likewise, the variability on Form B seems to be a little greater than that on Form A. The data for the first-year students and for the second- and third-year students tend to confirm these observations. However, for practical purposes, it appears that the two forms could be used interchangeably if the fact is kept in mind that, on the average, students can be expected to be two or three points higher in total score on Form B than on Form A.

It may be appropriate to offer some suggestions concerning critical points on the Orientation Test, although more precise recommendations in this regard will be made later in research publications. It will be observed that at the first-year level Q1, or the point below which 25 per cent of the total scores fall, is 37.2 for Form A and 38.3 for Form B. It is further shown in Table I that the tenth percentile, or the point below which 10 per cent of the scores are found, is 26.8 on Form A and 26.5 on Form B. It may be helpful for users of this test to keep in mind the fact that if a first-year accounting student receives a total raw score of 35 or below he will be in the lowest quarter of the group on the basis of the national norms and that if he obtains a score of 25 or below he will fall within the lowest 10 per cent. At the second- and third-year levels the corresponding points may be taken at 45 and 35. Individual colleges may wish to note the tenth and twenty-fifth percentiles of the distributions of scores for their own students. Sufficient research has been done to show that, in general, very few students whose total scores on the Orientation Test fall within the lowest quarter of their class are able to make grades of A or B in the study of accounting and that almost none of those in the lowest 10 per cent obtain grades that high. A corollary to this statement, of course, is that a very large proportion of the failures come from those low-scoring groups.

On the other hand, it should be kept in mind that no test is perfectly reliable and that occasional individuals will show a wide discrepancy between test score and performance in class. The results of the Orientation Test should not be regarded as conclusive evidence concerning the accounting aptitude of an individual for study in this field but rather as an important item of information which should be checked against other information about the individual.

The difference between the median total raw scores of the first-year accounting group and the combined second- and third-year accounting groups is

TABLE I

SUMMARY DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORMS A AND B,  
BY FIRST YEAR ACCOUNTING STUDENTS, FALL, 1947

Score	Verbal		Score	Quantitative		Score	Total	
	Form A	Form B		Form A	Form B		Form A	Form B
99-100								
96						128		
93	2					130		
90	7	4	30	8	14	124		
87	15	9	29	25	32	120	4	1
84	21	17	28	40	49	116	5	6
81	30	34	27	39	52	112	9	10
78	56	52	26	61	89	108	17	27
75	61	67	25	90	140	104	21	31
72	100	69	24	120	186	100	41	54
69	137	98	23	155	213	96	83	66
66	141	143	22	189	191	92	99	84
63	197	185	21	213	260	88	137	133
60	232	213	20	306	280	84	177	164
57	250	291	19	335	340	80	202	231
54	311	268	18	370	362	76	249	280
51	360	359	17	405	382	72	353	286
48	411	366	16	482	382	68	406	404
45	477	423	15	582	417	64	450	432
42	601	454	14	608	442	60	525	469
39	614	465	13	635	478	56	630	509
36	677	500	12	627	414	52	717	524
33	684	452	11	573	479	48	775	531
30	678	472	10	576	442	44	738	501
27	647	460	9	526	353	40	695	537
24	631	366	8	447	337	36	642	412
21	523	361	7	377	234	32	579	390
18	376	328	6	341	207	28	478	353
15	338	273	5	246	198	24	360	300
12	216	207	4	172	109	20	293	205
9	143	132	3	160	86	16	169	146
6	80	102	2	125	36	12	111	92
3	24	50	1	92	29	8	57	61
0-2	9	51	0	124	38	4	18	25
						0-3	9	7
Total	9049	7271		9049	7271		9049	7271
Q3	48.5	50.9		17.2	19.1		63.9	67.6
Md.	36.8	38.3		13.2	14.4		49.9	52.6
Q1	26.6	26.6		9.3	10.4		37.2	38.3
Range	0-95	0-91		0-30	0-30		1-123	0-120
10%ile	18.8	17.0		5.9	7.1		26.8	26.5
90%ile	61.2	62.3		21.2	23.2		78.2	81.4

TABLE II

SUMMARY DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORMS A AND B,  
BY SECOND AND THIRD YEAR ACCOUNTING STUDENTS, FALL, 1947

Score	Verbal		Score	Quantitative		Score	Total	
	Form A	Form B		Form A	Form B		Form A	Form B
99-100						128-		
96						130		
83						124		
90	1	4	30	2	2	120		
87	2	6	29	2	4	116	1	4
84	5	10	28	5	9	112	3	7
81			27	5	5	108	3	5
78	6	17	26	12	13	104	3	11
75	5	12	25	10	25	100	3	15
72	10	16	24	12	30	96	9	11
69	9	13	23	9	24	92	8	18
66	11	13	22	16	13	88	15	15
63	9	12	21	19	29	84	11	13
60	16	13	20	25	32	80	16	12
57	15	19	19	27	27	76	23	25
54	26	15	18	28	31	72	16	32
51	25	33	17	26	28	68	29	27
48	33	24	16	26	34	64	38	37
45	28	38	15	29	33	60	36	33
42	34	35	14	29	31	56	32	39
39	39	39	13	30	24	52	41	37
36	33	30	12	30	21	48	43	37
33	38	25	11	24	20	44	27	26
30	19	26	10	20	19	40	28	25
27	23	33	9	18	12	36	16	22
24	24	19	8	17	14	32	23	22
21	16	18	7	9	11	28	9	8
18	7	12	6	3	3	24	8	6
15	4	7	5	3	2	20	2	10
12	4	5	4	3	4	16		1
9	1	4	3	2		12		2
6		1	2	1		8		1
3		1	1			4		
0-2		1	0	1	1	0-3		
Total	443	501		443	501		443	501
Q3	54.5	58.5		20.3	22.0		72.1	77.2
Md.	43.2	44.5		16.1	17.8		59.1	61.8
Q1	34.0	32.8		12.3	13.8		47.7	48.2
Range	11-90	2-91		0-30	0-30		22-116	10-119
10%ile	25.5	24.2		9.3	10.2		36.6	36.0
90%ile	67.3	74.8		24.3	25.3		88.2	97.1



less than ten points, and the difference is, of course, smaller on the parts of the test. Since the second- and third-year students have had the advantage of additional study, a question may be raised concerning why the difference in total raw score points is not larger. In answer to this question, it should be recalled that the Orientation Test is designed to measure general aptitude for study in this field and not knowledge based on the study of specific courses. The study of accounting will tend to raise scores on a test of this kind in a moderate degree but to a much smaller extent than is the case if the measuring instrument is an achievement test.

At both the first-year level and the combined second- and third-year levels, the results of the Orientation Test in the fall of 1947 are considerably lower than the median scores obtained in 1946 in the verbal part of the test, and the current medians are slightly lower than the earlier medians in the quantitative part. No satisfactory explanation for these differences has been found. The fact that about twice as many colleges participated in 1947 may be a partial explanation so far as the first-year level is concerned, for perhaps a larger number of less highly selective colleges took part in the program, but this explanation is scarcely applicable to the combined second- and third-year levels, for at the latter levels, the sampling was less extensive in 1947 than in 1946.

A few fourth-year accounting students took the Orientation Test this fall, but there were not enough cases to make it feasible to report distributions of the results.

Distributions of the raw scores on Achievement Test, Level I, Form A and Form B, and Achievement Test, Level II, Form B, are shown in Table III. It should be emphasized that these tables simply present the distributions of scores from several colleges that were invited to give these tests on an experimental basis to provide data for research. The spring program is the one in which the Achievement Tests will be used on a regular service basis.

Even in these small groups, however, it is to be noted that there are very large differences in the achievement of students presumably studying at the same level.

Raw scores on Form A and Form B of Achievement Test, Level I, are not directly comparable. Although the two forms cover similar content, there are more questions in Form B, and the raw scores may be expected to run considerably higher on that form. The possible numbers of total raw score points on the two forms are 120 on Form A and 178 on Form B. The maximum score on the Level II test is 150.

#### Distributions of Orientation Test Scores in Individual Colleges

Distributions of total scores made on the Orientation Test by first-year accounting students in individual colleges participating in the fall, 1947, program are shown in Tables IV and V. Table IV shows the distributions of total scores made on Form A of this test and Table V shows the distributions for Form B. Distributions for second- and third-year accounting students in individual colleges are given in Tables VI and VII. Table VI shows the Form A distributions and Table VII the distributions for Form B. In Table VIII there are distributions for six colleges that cooperated in the experimental use of Achievement Test, Level II, Form B, with their seniors. For nearly all the colleges whose results were reported in Tables IV through VII, the distri-

TABLE III

SUMMARY DISTRIBUTIONS OF SCORES ON ACHIEVEMENT TESTS IN COLLEGES THAT COOPERATED BY USING THESE TESTS EXPERIMENTALLY, FALL, 1947

Score	Achievement Test, Level II		Score	Achievement Test, Level I		
	Form B			Form A	Score	Form B
150						
147						
144						
141						
138						
135					177	
132					178	
129	1				176	
126	2				172	
123					168	
120	6		120		164	
117	3		117		160	
114	4		114		156	
111	2		111		152	
108	5		108		148	
105	6		105		144	
102	7		102	1	140	
99	8		99	1	136	
96	3		96	1	132	
93	7		93	2	128	
90	8		90	2	124	
87	8		87		120	
84	16		84	4	116	
81	9		81	3	112	
78	12		78	3	108	
75	6		75	2	104	
72	3		72	1	100	
69	10		69	3	96	
66	10		66	5	92	
63	6		63	8	88	
60	10		60	3	84	
57	10		57	2	80	
54	9		54	6	76	
51	4		51	9	72	
48	4		48	3	68	
45	2		45	9	64	
42	1		42	2	60	
39			39	2	56	
36	4		36	4	52	
33	1		33	4	48	
30			30		44	
27	2		27	3	40	
24			24	2	36	
21			21	1	32	
18			18	1	28	
15			15		24	
12			12	1	20	
9			9		16	
6			6		12	
3			3		8	
0-2			0-2		4	
					0-3	
Total	189		Total	88	Total	142
Q3	95.9		Q3	70.0	Q3	101.8
Md.	81.2		Md.	55.5	Md.	85.1
Q1	63.1		Q1	45.7	Q1	70.0
Range	27-131		Range	13-103	Range	29-155
10%ile	54.3		10%ile	33.6	10%ile	56.1
90%ile	110.5		90%ile	85.7	90%ile	123.2

TABLE IV  
DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM A, BY FIRST-YEAR ACCOUNTING STUDENTS IN TWENTY-FOUR COLLEGES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
128-130																									128-130
124																									124
120				1		1					1					1									120
116	1		1		1	1			1	1				1											116
112	1	1	2		2	1	2				1														112
108	2	2	3	2	1	1	3		1	4	4														108
104	8	2		1	5	5	1																		104
100	2	6	5	2	4	6	7		2	8	5			1	1										100
96	10	11	4	3	9	9	13	1	6	8	8			2	2	4	5	1	1		1				96
92	9	12	9	9	7	14	13	1	4	10	18	3			2	1	1		1	2	2			1	92
88	11	12	11	9	17	11	16	7	4	10	13	1	2	10	2	7	2	1	2	2	2				88
84	13	13	10	11	26	12	30	6	7	12	33	2	3	3	1	4	5			3	6		1	1	84
80	11	25	19	14	16	14	15	7	11	15	31	3	4	7	2	7	4	3	3	5	6		5	1	80
76	11	11	15	25	29	24	26	11	10	25	42		5	5	1	9	9	4	7	2	5	2	6	1	76
72	15	23	36	24	43	27	41	9	16	27	55	7	6	8	4	12	12	2	3	5	9	1	8	2	72
68	13	34	15	32	51	27	42	11	16	34	72	6	12	20	3	14	15	5	2	6	16	2	4	1	68
64	12	30	23	35	59	30	29	16	21	43	68	14	10	21	5	22	9	12	12	13	10	1	6	4	64
60	11	23	36	37	59	31	50	19	22	49	72	10	10	27	6	26	17	16	8	15	15	2	15	9	60
56	3	30	25	37	73	32	51	28	32	49	98	8	17	30	13	29	27	13	13	14	26	2	20	12	56
52	3	15	32	38	70	30	56	21	40	59	127	29	31	27	14	38	27	14	15	19	38	2	17	17	52
48		22	20	48	64	37	52	21	41	61	125	30	21	38	17	43	35	22	24	20	46		32	17	48
44	1	11	19	33	56	32	44	13	44	55	122	27	31	57	11	53	27	20	22	17	39	8	39	13	44
40		5	8	22	41	33	30	18	44	65	114	17	26	37	11	47	46	20	24	29	58	5	38	22	40
36		6	8	21	41	22	20	16	26	61	111	25	26	38	18	35	31	15	22	30	45	7	56	23	36
32		2	4	16	18	15	29	6	24	64	86	15	13	38	16	42	38	23	23	32	60	6	50	23	32
28			5	4	12	12	16	1	13	44	70	14	9	26	14	34	36	21	13	32	54	8	53	31	28
24			1	2	11	7	13	2	19	22	62	6	10	16	7	29	23	14	12	15	41	1	45	24	24
20				1	6	5	12	2	9	20	54	4	12	11	4	26	9	6	18	9	36	1	37	31	20
16				1			8		4	11	27	1		8	4	17	6	5	9	5	25	3	28	18	16
12							5		3	8	7		1	4	3	9	3	11	8	8	16		20	12	12
8							2		2	4	5		1	1	1	6	1	2	6	9	9		13	8	8
4									1	1	3			1		1			1	2	1		5	3	4
0-3									1	1	2				1			1	2		2			1	0-3
Total	137*	296	311	428	721	439	626	216	423	772	1440	223	254	437	165	517	385	231	250	286	575	51	498	277	Total
Q3	91.5	81.6	76.3	71.3	70.4	72.9	73.0	67.8	62.9	64.6	63.7	55.8	58.2	59.4	56.8	57.1	57.0	55.8	52.9	55.3	51.9	47.6	46.9	47.6	Q3
Md	79.8	68.5	63.7	59.0	58.3	58.1	58.0	57.1	50.2	50.0	49.8	48.2	47.7	46.7	45.3	44.9	44.0	43.5	41.8	41.4	39.9	39.7	35.8	33.8	Md
Q1	69.3	57.7	53.6	48.6	47.7	44.7	46.0	46.8	40.4	37.2	37.6	38.4	38.7	36.4	33.8	32.7	33.9	31.6	30.0	32.1	29.0	31.9	25.9	23.5	Q1
Range	43-118	32-112	25-119	16-120	20-116	20-120	10-115	22-97	6-116	7-119	1-123	14-95	10-105	7-118	3-106	6-120	9-101	2-98	2-92	6-98	1-104	18-78	5-85	3-94	Range

\*Excluded from norms. Graduate Level.

TABLE V  
DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM B, BY FIRST-YEAR ACCOUNTING STUDENTS IN TWENTY-ONE COLLEGES

	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44		
128-130																						128-130
124																						124
120			1																			120
116	3		2													1						116
112	2	1	1		1		1				2	1				1						112
108	4	2	10	2	3		2		1		1					2						108
104	7	2	8	2	2		6		3								1					104
100	4	2	23	2	4	1	7	1	7	2	1											100
96	7	5	15	5	12		9	1	1		2	1	1		2	4						96
92	11	5	24	7	8		8	3	7	3		1	2		1	2	2					92
88	7	3	49	9	15	1	17	2	5	3	3		3		1	5	5			2		88
84	11	7	70	8	19		18	3	9	3	2	1		1	4	3	1	2	1			84
80	7	7	77	12	46	1	26	3	18	3	4	3	4	1	4	7	4					80
76	8	5	103	15	46	1	20	5	23	3	8	3	4	2	8	17	5					76
72	4	10	85	17	52	3	33	6	22	9	3	2	1	4	3	2	13	10	2	5	1	72
68	4	14	127	11	71	3	40	7	51	16	7	1	6	4	6	22	10			4	1	68
64	2	10	130	14	85	2	42	11	52	10	5	2	8	9	15	18	11	3	3			64
60	1	8	97	25	89	2	48	9	87	11	8	5	2	8	14	25	14	9	5	7		60
56	2	9	105	20	89	6	35	12	87	17	13	9	8	20	3	19	17	5	6	1		56
52	2	7	117	19	91	2	44	9	92	14	15	4	11	18	5	16	23	7	4	4		52
48		3	77	22	69	3	59	16	106	24	11	8	7	12	6	21	43	7	10	9		48
44		4	69	17	59	3	54	11	93	20	15	7	10	16	1	20	46	10	8	10		44
40	2	4	57	19	61	2	51	11	108	7	13	4	13	27	3	32	63	19	6	17		40
36		1	26	8	39	2	40	9	80	17	8	4	13	24	2	26	49	16	7	21		36
32		1	25	9	30	4	29	13	64	21	9	10	10	21	1	25	46	18	16	27		32
28		1	18	5	21	3	30	7	61	16	11	7	7	19	5	28	50	14	11	23		28
24			6	3	13	2	38	4	42	16	11	3	4	10	7	17	53	16	13	27		24
20			5	2	13	2	18	2	23	4	7	6	4	3	4	12	52	9	15	19		20
16			3		4		10		13	8	1	2	6	2	1	11	34	3	21	25		16
12			1		1		8		11	2	3	2	3	1	1	9	23	5	7	9		12
8			1	1	1		5		4	1	1	1			11	27	7	1		3		8
4							3	1	1	2	1	1		1		8	2	2	2	3		4
0-3											1					3			3	1		0-3
Total	88	111	1332	254	944	43	701	146	1071	232	162	92	122	212	47	304	667	439	148	156	208*	Total
Q3	98.9	83.6	77.9	75.5	70.4	66.5	69.2	66.0	60.8	61.8	60.8	60.8	57.8	57.0	54.6	56.0	52.6	51.1	47.2	51.2	39.6	Q3
Md	88.6	70.1	65.8	60.3	59.1	53.0	52.5	51.8	49.3	48.3	48.0	47.4	44.4	43.7	42.0	41.6	39.1	38.5	37.5	33.5	31.1	Md
Q1	78.5	59.0	53.5	47.9	47.6	35.8	39.4	40.2	38.4	33.7	34.0	32.4	34.6	35.2	26.7	30.3	25.5	27.3	28.3	21.6	22.3	Q1
Range	42-119	29-113	9-120	8-110	10-112	20-100	6-112	5-101	7-110	6-100	1-114	6-113	12-98	7-96	4-87	8-97	0-118	5-106	5-106	5-86	0-89	Range

\*Excluded from norms. Foreign language background.

TABLE VI

DISTRIBUTIONS OF SCORES ON ORIENTATION TEST, FORM A,  
OF SECOND-AND THIRD-YEAR ACCOUNTING STUDENTS

	20	15	16	12	16	22	20	
128-130								128-130
124								124
120								120
116		1						116
112			2		1			112
108	1		1		1			108
104	1				2			104
100	1		1		1			100
96	1	2	3		2	1		96
92		1	2		5			92
88			3	3	8	1		88
84	1	3	4	2	1			84
80	1		7	2	2	4		80
76	2		10	3	5	2		76
72		2	5	2	3	4		72
68		1	8	2	9	4	5	68
64	1	2	8	3	14	5	4	64
60		1	11	3	15	2	4	60
56		1	4	6	9	6	5	56
52	2	2	6	4	13	8	5	52
48	1	1	6	5	18	8	4	48
44			6	2	7	9	3	44
40	1		5	1	9	4	8	40
36	1		3	3	4	3	2	36
32	1		4	1	6	6	5	32
28					5	3	1	28
24					5	3		24
20					1		1	20
16								16
12								12
8								8
4								4
0-3								0-3
Total	15	17	99	42	146	73	47	Total
Q3	97.0	87.7	79.3	75.0	69.6	66.2	61.3	Q3
Md	77.0	73.0	66.3	59.3	58.2	52.3	51.5	Md
Q1	51.0	61.0	52.5	50.8	47.7	43.3	41.4	Q1
Range	34-109	49-116	32-114	32-91	22-113	24-97	22-71	Range

TABLE VII

DISTRIBUTIONS OF SCORES ON ORIENTATION TEST, FORM B,  
OF SECOND- AND THIRD-YEAR ACCOUNTING STUDENTS

	25	15	40	45	41	40	45	41	
128-130									128-130
124									124
120									120
116	4								116
112	5	1			1				112
108	3					1		1	108
104	6		2			1	1	1	104
100	9		1	2		2		1	100
96	4	1		1	2	2	1		96
92	8		1			5	2	2	92
88	3		2		2	5	2	1	88
84	5	1	1		4		2		84
80	6					4	1	1	80
76	2	2	2	1	6	7	4	1	76
72	3	1	7	1	3	9	4	4	72
68	2	2	2	1	4	7	5	4	68
64	3	2	4	3	4	10	8	3	64
60			2	1	2	12	9	5	60
56	1	1	3	1	5	12	10	6	56
52		1	4	2	6	10	10	3	52
48			3		3	16	12	3	48
44			3	1	4	7	4	7	44
40			1	1	2	6	8	7	40
36			1	1	2	7	10	1	36
32	1		1		1	10	4	5	32
28					1	4	2	1	28
24				1		2	2	1	24
20						4	3	3	20
16						1			16
12						1		1	12
8						1			8
4									4
0-3									0-3
Total	65	12	40	17	52	146	104	62	Total
Q3	105.2	82.0	75.4	75.0	77.3	71.7	66.0	68.5	Q3
Md	95.3	72.0	66.0	64.7	64.0	57.3	54.8	54.7	Md
Q1	82.8	66.0	53.0	52.5	52.0	44.3	42.5	42.0	Q1
Range	35-119	52-114	34-107	24-101	30-113	10-110	22-105	14-108	Range

TABLE VIII

DISTRIBUTIONS OF SCORES MADE ON ACHIEVEMENT TEST, LEVEL II, FORM B, BY SENIORS IN SIX COLLEGES

	18	6	46	4	47	48	
150							150
147							147
144							144
141							141
138							138
135							135
132							132
129					1		129
126	2						126
123							123
120	4	1		1			120
117	1		1	1			117
114	1	2		1			114
111	1				1		111
108	2	2			1		108
105	4	1	1				105
102	4	1	1			1	102
99	4	1		1	1	1	99
96	4	1	2				96
93	4	2				1	93
90	3	2		2	1		90
87	1	3	1	2		1	87
84	6	2		2	1	5	84
81		3	1		1	4	81
78	2	1	1	3		5	78
75	1	1		2		2	75
72		2			1		72
69		1	1	1		7	69
66	1			1	2	6	66
63		2			1	3	63
60				1		9	60
57			1		2	7	57
54						9	54
51	1				1	2	51
48						4	48
45						2	45
42			1				42
39							39
36				1		3	36
33						1	33
30							30
27	1					1	27
24							24
21							21
18							18
15							15
12							12
9							9
6							6
3							3
0-2							0-2
Total	43	28	11	19	14	74	Total
Q3	108.4	102.0	102.8	91.9	100.5	77.3	Q3
Md	100.1	89.0	88.5	84.8	78.0	62.7	Md
Q1	86.4	81.0	71.3	76.1	64.5	55.8	Q1
Range	27-128	63-121	44-119	36-121	52-131	28-103	Range

butions for the seniors in Table VI are based on complete classes, since certain cooperating colleges permitted their seniors to take the Level II test on a voluntary basis. This procedure was satisfactory for the research purposes for which the test was being given.

The colleges are designated by code numbers. Each college will be informed of its own number.

The distributions are in terms of raw scores as indicated by the scale near the margin of each chart. The Q3 or seventy-fifth percentile, the median or fiftieth percentile, and the Q1 or twenty-fifth percentile for the distribution of scores of the entire group of students at each level are indicated by the broken lines running horizontally across each table. The median and the inter-quartile range are shown graphically beside each distribution.

These tables agree with those that were included in Bulletins Nos. 1 and 3 summarizing the testing programs in 1946 and 1947 in that they show large differences among the colleges in aptitude as measured by this test for the study of accounting. The differences among the groups on the Orientation Test, particularly those shown in Tables IV and V for the first-year students, are of considerable significance, since the comparisons are, in most instances, based upon complete or nearly complete class groups. The differences among the six colleges that administered the experimental form of the Level II test to the seniors are of little or no importance because some of these class groups were not complete. It should be stressed that the use of the Level II Achievement Test in the fall program was strictly a research use, and that the regular program with this test will take place in the spring of 1948.

Large as some of the differences are among the median scores of class groups in different colleges, the differences among the individuals in single class groups tend to be much larger. It is the differences among individuals to which each college should give special attention. These differences should serve as one of the bases for the guidance of qualified students into the further study of accounting and, at the same time, for the guidance of low-scoring students into other fields of study.



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