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LEVEL II (12) 32

Selection of Officer Candidates
Validation Study of "Leadership Test" L-1, X-1 at Forts Belvoir and Benning.

(11) 15 Jun

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Purpose:

(1) To derive a scoring scale for L-1, X-1 by analysis of responses of men differing in leadership qualities.

(2) To validate such a scoring scale.

Population:

238 students in officer candidate school, Class 90, and 208 students in Class 91 were tested at Fort Benning during their first week of training (Oct. 8, 1942). 362 students in the 15th OCS at Fort Belvoir were tested during their ninth week of training (Aug. 8, 1942). Of Class 90 at Ft. Benning, some 30 failed in leadership; of Class 91, 29 failed in leadership and of Class 15 at Ft. Belvoir, 34 failed in leadership. Failures in academic subjects (a problem with which this study is not concerned) were not considered as failures in the analysis of the data. A number of cases with incomplete data occurred.

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Variables:

1. Standard scores on AGCT were available for all three classes.
2. Leadership ranks in Classes 90 and 91 at Fort Benning were obtained at the end of the course. Leadership grades in Class 15 at Fort Belvoir were obtained at the end of the course.
3. "Leadership Test" L-1, X-1, which is composed of 150 statements expressing opinions about leaders, about leadership techniques, about important or damaging attributes of leaders, and situations involving needs for leadership. Some statements are judged with respect to the desirability of possession by good leaders; some are ranked in importance in groups of threes, and some are judged with respect to frequency of such action.

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Procedure:

1. Answer sheets for Fort Belvoir OCS #15 were divided into an upper group (88 cases) a middle group (186 cases) and a lower group (88 cases) according to the distribution of leadership grades. The distribution of leadership grades suggested this division rather than that used for the Fort Benning classes. Fort Benning Classes 90 and 91 were divided into thirdsaccording to leadership rankings. Graphic item counts were made of all responses for each of the above groups.

   It was originally intended to make the item analysis on the Fort Belvoir OCS #15, and validate the scoring scales upon Fort Benning OCS #90 and 91. An early inspection of the item counts derived from Ft. Belvoir OCS #15 indicated that few differential responses were being revealed; hence, the item responses of the Ft. Benning Classes 90 and 91 were also analyzed.

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2. Many response counts were identical or very nearly the same in magnitude for the upper and the lower groups. To prevent the waste of time required to convert these counts into percentages and standard errors, no further statistical analysis was made unless there was a difference in counts of at least 5. If the number of responses in upper and lower groups differed by 5 or more, the response counts were converted into percentages, the differences between upper and lower group percentages found and compared with their standard errors. When the test of significance (CR $\geq$ 2) was applied, few discriminative responses were found. Further, it was noted that a CR of $+2$ based upon one sample might be associated with a CR of -2 in another sample. As a result it was considered advisable to modify the criterion of selecting items to include responses with a CR of >1 on any sample and not reversed in any other sample with a CR $>.3$.
3. A scoring key was constructed from the selected responses. A response marked more frequently by men judged high in leadership than by men judged low in leadership was assigned a weight of -1. Conversely, a response marked more frequently by men judged low in leadership than by men judged high in leadership was assigned a weight of -1. All other responses were eliminated.
4. The answer sheets for Fort Benning Classes 90 and 91 were scored with the above key. The resulting scores were correlated with leadership ranks and with OCT standard scores.
5. Since the low thirds, selected on the basis of leadership rankings, of Fort Benning Classes 90 and 91 were composed of about equal numbers of men who were low and failed because of poor leadership as against men who were low and passed, the L-1, X-1 scores of these sub-groups were averaged to observe whether the key would differentiate failures from successes within the low groups on which responses had been selected.

Results:

1. The response counts for all 487 responses in the test for the three classes divided into upper, middle, and lower groups and total group are shown in Table I. Responses which discriminate the upper group from the lower group by a CR $\geq$=1 are marked with asterisks.
2. Responses which may be considered significantly discriminative, i.e., CR $\geq$=2, are listed in Table II according to the sample on which derived. It will be observed that seven responses satisfy this criterion on two samples, and of these, two responses do so with changed signs. No responses satisfy this criterion for all three samples.
3. Table III shows the responses finally chosen to compose the scoring key. 51 responses were assigned positive weights and 57 were assigned negative weights. The responses selected for scoring were included in 68 items out of the total of 150. Therefore, 82 items had no responses considered to be sufficiently discriminative to warrant inclusion in the scoring system.
4. When L-1, X-1 was scored as indicated in Table III, the scores obtained were averaged, and were correlated with leadership rankings. These means, standard deviations and correlations are shown in Table IV.

5. The mean scores of the men in the low groups who passed, and the mean scores of the men in the low groups who failed, the standard deviations and the critical ratios of the differences between the mean scores are shown in Table V.

Discussion:

1. In evaluating the results of this study the effects of chance must be considered. It was observed that use of a critical ratio of two or more yielded 20, 34, and 25 significant responses based on Classes 15, 90, and 91 respectively. Not one response satisfied this criterion for all three classes, and only seven (two of these were of unlike sign) for two of the classes. This result in itself suggests that chance is the dominant factor in the results obtained.
2. Further, if it is assumed that the 487 response differences were owing to chance alone, it would be expected that five per cent of them would deviate from zero by two standard deviations; hence, 24 critical ratios of two or greater would be found. Actually, 20, 34, and 25 were found in the three classes.
3. Since chance alone can account for the observed distributions of response differences, the validity coefficients obtained are most likely the result of capitalizing on chance by computing them for the groups whose responses served as the basis of item selection. The validity coefficients, then, reflect the extent to which such coefficients can be spuriously raised, rather than the "true" validity of the test. The only comparison which is not seriously affected by this spurious factor is that between the men in the low criterion group who passed or failed in leadership. This rigorous comparison yielded differences in the direction of indicating the test validity but they were unreliable.

Conclusions:

1. There is no clear-cut evidence of the validity of L-1, X-1 scored by the key developed in this study. It is highly unlikely that application of the test to a new group would yield a validity coefficient even approximating the one of .40 obtained in this study.
2. L-1, X-1 appears to discriminate slightly between men who pass in leadership and those who fail, but the difference is not reliable.
3. GCT does not correlate with leadership ratings for the range of talent tested, nor does GCT correlate with L-1, X-1 scores.

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Table I. Response Counts for L-1, X-1 According to High, Middle and Low Leadership Groups for OCS Class 15 at Fort Belvoir and OCS Classes 90 and 91 at Fort Benning: Grouping as follows;

	Belvoir Class 15	Benning Class 90	Benning Class 91
Group	N	N	N
High	88	66	66
Middle	186	67	68
Low	88	66	66
Total	362	199	200

Note: Summation of the responses to an item will not always equal N. This is due to omissions and to failures of the test scoring machine to record exactly. The response count was accepted when the error (determined by scoring with no key) was less than 3 percent.

		Belvoir OCS Class 15				Benning OCS Class 90				Benning OCS Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C'	D
1.	HIGH	34	28	12	8	30*	22	12	3	33*	21	11	0
	MIDDLE	66	62	37	18	27	24	9	3	29	22	9	6
	LOW	35	27	17	9	21*	28	9	7	23*	20	17	3
	TOTAL	135	117	66	35	78	74	30	13	85	63	37	9
2.	HIGH	3	6*	51*	26	1	24*	28	13	3	15	35*	11
	MIDDLE	12	25	89	59	3	13	34	14	1	13	34	20
	LOW	4	18*	34*	30	8	10*	35	13	2	10	47*	9
	TOTAL	19	49	174	115	12	47	97	40	6	38	116	40
3.	HIGH	42*	25*	15	6	31*	18	12	5	25	20	15	6
	MIDDLE	77	52	29	28	33	15	14	6	27	21	14	5
	LOW	50*	13*	15	10	41*	12	6	7	24	18	16	9
	TOTAL	169	90	59	44	105	45	32	18	76	59	45	20

*Signified that difference between percentage responsing in high group and percentage responding in low group is equal to or greater than one standard error of difference.

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
4.	HIGH	1	12	17	58	3	11	19	33	2	11	19	34
	MIDDLE	8	18	42	118	1	15	27	32	2	11	27	28
	LOW	2	11	22	54	2	15	13	36	1	15	14	35
	TOTAL	11	41	81	230	6	41	59	101	5	37	60	97
5.	HIGH	27	12*	29	19	4	13	26	23	7	10	23	23
	MIDDLE	63	43	38	40	6	10	28	26	13	8	28	19
	LOW	27	22*	25	16	8	10	24	24	9	14	27	16
	TOTAL	117	77	92	75	18	33	78	73	29	32	78	58
6.	HIGH	30	31*	16	10	26	21	13	4*	16	27	16	5
	MIDDLE	59	54	43	30	29	19	13	3	20	28	13	5
	LOW	29	25*	19	14	22	25	10	9*	17	25	17	8
	TOTAL	118	110	78	54	77	65	36	16	53	80	46	18
7.	HIGH	11*	13	25	39*	2	4	11	48	2	14*	21	28*
	MIDDLE	15	29	81	91	6	4	21	45	5	11	21	32
	LOW	4*	10	27	46*	2	7	10	47	4	5*	21	37*
	TOTAL	30	52	133	176	10	15	42	140	11	30	63	97
8.	HIGH	16	42	15	13	11	27	16	13	9	21	19*	17
	MIDDLE	47	79	28	32	10	25	17	17	8	29	17	12
	LOW	17	39	17	15	7	31	11	16	11	28	10*	18
	TOTAL	80	160	60	60	28	83	44	46	28	78	46	47
9.	HIGH	57*	18	10	2	36*	20	6	3	24*	24	14	3
	MIDDLE	112	46	19	10	34	20	9	0	28	27	9	4
	LOW	47*	24	13	4	43*	15	7	1	33*	21	10	3
	TOTAL	216	88	42	16	113	55	22	4	85	72	33	10

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
10.	HIGH	62	20	6	0	32*	24*	10	1	31*	25*	8	1
	MIDDLE	116	55	7	8	39	18	3	2	31	32	3	1
	LOW	65	18	3	3	38*	15*	11	3	40*	17*	8	2
	TOTAL	243	93	16	11	109	57	24	6	102	74	19	4
11.	HIGH	1	8	27	52	3	5	29	30	1	5	24*	36*
	MIDDLE	9	12	69	76	0	3	29	50	1	0	29	38
	LOW	2	7	25	54	5	4	25	33	1	3	18*	45*
	TOTAL	12	27	121	182	8	12	83	113	3	8	71	119
12.	HIGH	35	23	22*	8*	21	20	13	12	24	22	19	1
	MIDDLE	56	63	51	17	31	15	11	12	31	23	11	3
	LOW	31	29	13*	15*	25	17	17	8	28	19	13	7
	TOTAL	122	115	86	40	77	52	41	32	83	64	43	11
13.	HIGH	15	36	31*	6*	7	35	21	5	9	38	16	3
	MIDDLE	24	84	61	18	13	30	14	7	9	43	14	3
	LOW	11	40	24*	13*	11	29	18	9	11	33	18	5
	TOTAL	50	160	116	37	31	94	53	21	29	114	48	11
14.	HIGH	5	7	16	60	0	6	12	50	0	5	28*	33*
	MIDDLE	6	10	35	134	1	4	21	50	6	5	21	35
	LOW	3	5	16	65	1	4	14	46	5	2	19*	42*
	TOTAL	14	22	67	259	2	14	47	146	11	12	68	110
15.	HIGH	19*	30*	24	15	16*	16	22*	13	18	20*	20	9
	MIDDLE	62	34	57	35	14	15	27	16	20	14	27	7
	LOW	29*	21*	20	18	23*	22	11*	11	20	11*	25	11
	TOTAL	110	85	101	68	53	53	60	40	58	45	72	27

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
16.	HIGH	25	21*	24	17*	13	15	26	12	10	20	23	13
	MIDDLE	56	47	50	33	16	17	21	16	15	19	21	13
	LOW	26	28*	23	11*	14	16	25	11	14	21	23	9
	TOTAL	107	96	97	61	43	48	72	39	39	60	67	35
17.	HIGH	14	8	32	34	16	9	22	19	7	10	23	26
	MIDDLE	26	29	63	68	11	9	25	27	11	12	25	20
	LOW	13	13	26	37	15	10	24	16	13	10	22	22
	TOTAL	53	50	121	139	42	28	71	62	31	32	70	68
18.	HIGH	32*	31*	18	8	13	11	21	21	11	13	24	19
	MIDDLE	73	53	45	15	15	17	27	18	11	15	27	15
	LOW	44*	17*	22	5	14	10	24	18	14	12	19	22
	TOTAL	149	101	85	28	42	38	72	57	36	40	70	56
19.	HIGH	60	22*	5	1	51	13	2	0	53	12	0	1
	MIDDLE	107	68	4	8	49	16	1	0	56	10	1	1
	LOW	55	29*	3	1	49	16	1	0	54	11	2	0
	TOTAL	222	119	12	10	149	45	4	0	163	33	3	2
20.	HIGH	18*	32*	19	18	12	20	23	11	18	15	19	13
	MIDDLE	43	50	53	38	18	24	28	13	10	22	28	8
	LOW	28*	19*	25	17	18	16	17	13	14	14	24	15
	TOTAL	89	101	97	73	48	60	68	37	42	51	71	36
21.	HIGH	37	31	14	6	34*	19	11	2	30	26*	8	2
	MIDDLE	74	68	39	5	35	21	2	3	36	29	2	1
	LOW	32	35	18	4	23*	26	8	8	39	17*	8	3
	TOTAL	143	134	71	15	92	66	21	13	105	72	18	6

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
22.	HIGH	18	27*	27*	16	7	12	26	21	9	13	30	16
	MIDDLE	44	46	63	33	12	11	29	17	12	18	29	9
	LOW	17	21*	34*	17	9	10	26	22	9	12	30	17
	TOTAL	79	94	124	66	28	33	81	60	30	43	89	42
23.	HIGH	11*	33*	27	17	1*	20*	30*	14*	4	11	34*	19*
	MIDDLE	38	58	57	35	6	17	30	21	5	14	30	19
	LOW	17*	25*	25	21	9*	13*	23*	20*	5	10	26*	26*
	TOTAL	66	116	109	73	16	50	83	55	14	35	90	64
24.	HIGH	7	21	31	29	5	9	32*	21*	7	15	22	22
	MIDDLE	15	43	60	67	3	16	25	24	3	17	25	23
	LOW	6	18	33	32	4	10	21*	32*	5	16	21	25
	TOTAL	28	82	124	128	12	35	78	77	15	48	68	70
25.	HIGH	67	12	14*	5	49	13	3	1	45	16	2	3
	MIDDLE	135	32	10	9	54	8	3	3	40	20	3	5
	LOW	68	9	3*	8	48	11	3	5	44	16	4	2
	TOTAL	270	53	27	22	151	32	9	9	129	52	9	10
26.	HIGH	2	3	5	77	2	5	10	49	3	5	18*	41*
	MIDDLE	9	12	12	154	5	6	14	46	3	7	14	44
	LOW	2	4	8	73	3	2	9	51	1	4	9*	51*
	TOTAL	13	19	25	304	10	13	33	146	7	16	41	136
27.	HIGH	61	16*	8	3	40	14	12	1	44	11	7	4
	MIDDLE	118	41	23	4	44	12	12	3	39	14	12	3
	LOW	67	10*	8	3	48	11	6	1	40	13	11	3
	TOTAL	246	67	39	10	132	37	30	5	123	38	30	10

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
28.	HIGH	38	54	12	4	18	25	19	3	10	26	23	7
	MIDDLE	66	83	31	5	19	25	29	7	10	17	29	13
	LOW	38	31	11	7	16	29	15	6	10	25	25	7
	TOTAL	142	148	54	16	53	79	63	16	30	68	77	27
29.	HIGH	17	16*	38*	16	14	31*	13	9	19	26	18	3
	MIDDLE	28	51	78	29	17	8	17	11	15	36	17	0
	LOW	18	23*	30*	16	13	22*	19	13	21	22	18	7
	TOTAL	63	90	146	61	44	61	49	33	55	84	53	10
30.	HIGH	20*	40*	14	9	20	26	13	7	18*	33*	11	4
	MIDDLE	49	58	54	17	18	26	13	9	18	33	13	3
	LOW	27*	28*	19	9	21	22	19	2	30*	25*	10	1
	TOTAL	96	126	87	35	59	74	45	18	66	91	34	8
31.	HIGH	43*	35*	5	2	42	21	1	1	26	30	7	1
	MIDDLE	114	61	6	3	40	24	6	0	35	25	6	2
	LOW	63*	19*	3	3	39	23	3	1	27	31	8	0
	TOTAL	220	115	14	8	121	68	10	2	88	86	21	3
32.	HIGH	77	7	0	2	48	17	0	0	36*	23*	2	2
	MIDDLE	153	26	2	2	47	10	3	0	55	10	3	0
	LOW	74	11	1	2	50	15	1	0	49*	13*	4	1
	TOTAL	304	44	3	6	145	42	4	0	140	46	9	3
33.	HIGH	48*	23*	15*	2	22	28	16	0	29*	18*	12	5
	MIDDLE	91	56	20	9	23	31	12	4	15	41	12	3
	LOW	41*	33*	9*	4	24	26	12	5	22*	29*	13	4
	TOTAL	180	112	44	15	69	85	40	9	66	88	37	12

		Class 15				Class 90				Class 91			
ITEM NO.	GROUP	A	B	C	D	A	B	C	D	A	B	C	D
34.	HIGH	21	49	17*	1	9	30	23	4	15	28	21	2
	MIDDLE	23	109	48	4	9	28	21	9	14	32	21	1
	LOW	16	44	22*	6	7	26	27	6	20	26	18	3
	TOTAL	60	202	87	11	25	84	71	19	49	86	60	6
35.	HIGH	23	28	32*	4	26	27*	8*	5	30	27*	6*	2
	MIDDLE	39	58	72	6	21	32	10*	4	30	27	10	1
	LOW	21	34	24*	9	26	18*	17*	4	36	14*	13*	4
	TOTAL	83	120	128	19	73	77	35	13	96	68	29	7
36.	HIGH	25*	36*	27*	2*	7	14*	39*	6	6	18*	31	10
	MIDDLE	53	67	55	11	10	7	30	12	7	25	30	7
	LOW	33*	26*	20*	9*	8	22*	32*	5	3	29*	27	8
	TOTAL	111	129	102	22	25	43	101	23	16	72	88	25
37.	HIGH	13	37	33	5	5	19	29	13	4*	14	33	15
	MIDDLE	30	68	67	21	6	16	37	11	4	20	37	9
	LOW	18	31	28	11	7	25	25	9	10*	13	30	13
	TOTAL	61	136	128	37	18	60	91	33	18	47	100	37
38.	HIGH	8	36	44		9*	33	25		11*	31*	23	
	MIDDLE	13	93	78		5	31	25		11	32	25	
	LOW	7	39	42		3*	32	30		3*	41*	23	
	TOTAL	28	168	164		17	96	80		25	104	7[illegible]	
39.	HIGH	80	8	0		56*	7*	3		54*	9*	2	
	MIDDLE	174	12	0		61	4	1		58	9	1	
	LOW	83	4	1		62*	2*	2		63*	4*	0	
	TOTAL	337	24	1		179	13	6		175	22	3	

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
40.	HIGH	6	43	39	3	25	38	0	24	40
	MIDDLE	4	78	104	2	32	40	2	27	40
	LOW	3	44	41	2	31	33	1	23	43
	TOTAL	13	165	184	7	88	111	3	74	123
41.	HIGH	14	29	45	5	20	41*	9	10*	47*
	MIDDLE	21	71	94	7	21	38	13	17	38
	LOW	11	27	49	10	22	33*	9	22*	36*
	TOTAL	46	127	188	22	63	112	31	49	121
42.	HIGH	11*	40	37	10	35*	21*	15*	35	16*
	MIDDLE	15	80	90	9	34	22	15	31	22
	LOW	6*	46	36	10	28*	28*	8*	34	25*
	TOTAL	32	166	163	29	97	71	38	100	63
43.	HIGH	69*	16	3	51	11	3	43*	20*	2
	MIDDLE	154	32	1	51	12	4	45	20	4
	LOW	74*	13	1	51	13	2	50*	11*	6
	TOTAL	297	61	5	153	36	9	138	51	12
44.	HIGH	14	70	6	26	38	2	13	45	8
	MIDDLE	22	156	9	18	41	5	24	40	5
	LOW	13	73	2	20	43	3	10	47	10
	TOTAL	49	299	17	64	122	10	47	132	23
45.	HIGH	78	10	0	41	21	4	49	7	10
	MIDDLE	166	18	2	48	14	11	38	20	11
	LOW	77	10	1	45	17	4	55	9	4
	TOTAL	321	38	3	134	52	19	142	36	25

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
46.	HIGH	6	6	76	1	6	59	6	13	47*
	MIDDLE	3	12	171	2	13	49	9	10	49
	LOW	1	5	82	3	5	57	2	12	53*
	TOTAL	10	23	329	6	24	165	17	35	149
47.	HIGH	6	41*	40	1	28	38	1	41	24
	MIDDLE	4	90	92	2	35	29	3	36	29
	LOW	1	51*	36	2	26	37	6	40	21
	TOTAL	11	182	168	5	89	104	10	117	74
48.	HIGH	4	44*	40*	1	39	26	1	26	39*
	MIDDLE	4	92	90	0	32	39	0	30	39
	LOW	2	35*	52*	2	37	26	0	21	46*
	TOTAL	10	171	182	3	108	91	1	77	124
49.	HIGH	82	4	2	65	0	1	63	3	0
	MIDDLE	180	5	1	67	0	0	65	3	0
	LOW	85	2	1	65	1	0	62	5	0
	TOTAL	347	11	4	197	1	1	190	11	0
50.	HIGH	11	23	55	7	19	39	4	19	43
	MIDDLE	18	53	115	3	19	39	6	23	39
	LOW	12	22	53	3	21	43	1	21	45
	TOTAL	41	98	223	13	59	121	11	63	127
51.	HIGH	67	18	3	52	13	2	50	13	3
	MIDDLE	136	41	9	54	10	3	53	13	3
	LOW	66	19	4	54	7	5	52	14	1
	TOTAL	269	78	16	160	30	10	155	40	7

		Class 15			Class 90			Class 91	
ITEM NO.	GROUP	A	B	C	A	B	C	A	B
52.	HIGH	20	44	24	9	33	24*	12	34
	MIDDLE	39	79	58	12	38	24	14	30
	LOW	15	46	27	13	38	16*	14	32
	TOTAL	74	169	109	34	109	64	40	96
53.	HIGH	9	71	8	9	44	8	9	50
	MIDDLE	9	142	28	10	54	16	7	45
	LOW	6	73	9	7	48	11	9	43
	TOTAL	24	286	45	26	146	35	25	138
54.	HIGH	4	11	74	4	8*	54	1	8*
	MIDDLE	2	27	154	1	5	46	5	18
	LOW	3	11	73	1	13*	51	1	16*
	TOTAL	9	49	301	10 6?	26	151	7	42
55.	HIGH	82	5	1	54	9	3	56	8
	MIDDLE	177	7	2	60	6	4	60	4
	LOW	83	2	3	59	6	1	57	8
	TOTAL	342	14	6	173	21	8	173	20
56.	HIGH	24*	25*	40*	10	31	25*	15*	25*
	MIDDLE	46	65	74	9	33	23	15	31
	LOW	16*	40*	31*	12	34	19*	22*	32*
	TOTAL	86	130	145	31	98	67	52	88
57.	HIGH	14	34	39	12	24*	30*	16*	23
	MIDDLE	30	73	83	10	20	34	18	16
	LOW	17	29	41	10	15*	41*	8*	24
	TOTAL	61	136	163	32	59	105	42	63

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
58.	HIGH	49	31*	7	45	13	8	34	16	15
	MIDDLE	113	47	26	49	14	11	37	21	11
	LOW	53	21*	12	43	16	7	37	11	19
	TOTAL	215	99	45	137	43	26	108	48	45
59.	HIGH	23	19*	46	26*	13	27	29	19	18*
	MIDDLE	42	49	92	22	21	18	34	16	18
	LOW	19	26*	43	14*	18	34	29	13	25*
	TOTAL	84	94	181	62	52	79	92	48	61
60.	HIGH	48	33	5	27	36	3	27	27	12
	MIDDLE	114	77	12	26	28	13	24	30	13
	LOW	48	33	7	30	33	3	25	35	7
	TOTAL	210	143	24	83	97	19	76	92	32
61.	HIGH	23	31	25	13*	18*	35*	9	21	34
	MIDDLE	49	56	73	19	19	36	11	22	36
	LOW	28	28	30	23*	14*	26*	13	18	35
	TOTAL	100	115	128	55	51	97	33	61	105
62.	HIGH	4	11*	71	1	8*	57*	4	8	53
	MIDDLE	12	23	145	3	12	51	3	13	51
	LOW	2	17*	68	7	16*	42*	4	10	53
	TOTAL	18	51	284	11	36	150	11	31	157
63.	HIGH	49	30	9	44*	20	2*	31*	25	9
	MIDDLE	97	72	16	39	23	7	35	26	7
	LOW	46	35	6	33*	24	10*	42*	18	7
	TOTAL	192	137	31	116	67	19	108	69	23

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
64.	HIGH	37	47*	4*	22	37*	6*	30*	30*	5
	MIDDLE	77	90	18	24	35	9	32	28	9
	LOW	39	39*	10*	25	26*	14*	21*	39*	7
	TOTAL	153	176	32	71	98	29	83	97	21
65.	HIGH	36	46	6*	38	25	3	39	20	6
	MIDDLE	86	85	15	40	24	7	41	21	7
	LOW	34	41	13*	32	30	4	42	22	3
	TOTAL	156	172	34	110	79	14	122	63	16
66.	HIGH	53	30	5	24*	32*	10	25	34	5
	MIDDLE	98	75	13	24	36	11	21	35	11
	LOW	54	28	6	38*	22*	7	18	37	11
	TOTAL	205	133	24	86	90	28	64	106	27
67.	HIGH	7	9*	72	5	9	52	1	12	52
	MIDDLE	7	23	153	3	7	47	10	11	47
	LOW	8	15*	66	4	13	49	7	8	52
	TOTAL	22	47	291	12	29	148	18	31	151
68.	HIGH	27*	35	26*	25*	28	17	28	24	14*
	MIDDLE	36	79	70	25	22	15	24	30	15
	LOW	15*	35	38*	17*	35	13	23	19	25*
	TOTAL	78	149	134	67	85	45	75	73	54
69.	HIGH	53	23	13*	29	19	18	30	16*	20
	MIDDLE	111	49	27	26	22	23	25	20	23
	LOW	55	26	8*	34	17	14	24	27*	16
	TOTAL	219	98	48	89	58	55	79	63	59

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
70.	HIGH	19	26	43	15	20	31	10*	25	30
	MIDDLE	44	58	83	16	23	27	24	17	27
	LOW	22	29	37	14	16	37	20*	21	26
	TOTAL	85	113	163	45	59	95	54	63	83
71.	HIGH	5	21*	61	5	15	46*	4	18*	44*
	MIDDLE	17	28	141	3	10	41	5	23	41
	LOW	7	16*	66	3	12	51*	4	12*	51*
	TOTAL	29	65	268	11	37	138	13	53	136
72.	HIGH	54	23	10	33	23	10	26*	25	14*
	MIDDLE	109	61	19	37	23	16	33	19	16
	LOW	56	24	9	37	21	9	37*	24	7*
	TOTAL	219	108	38	107	67	35	96	68	37
73.	HIGH	24	41	22	28	28*	10	36*	21*	9
	MIDDLE	56	97	33	25	35	13	28	27	13
	LOW	25	46	17	24	34*	8	26*	31*	10
	TOTAL	105	184	72	77	97	31	90	79	32
74.	HIGH	40	32	16	29	26	11	27	24	14
	MIDDLE	95	66	25	37	18	18	30	20	18
	LOW	38	34	15	32	20	14	35	19	13
	TOTAL	173	132	56	98	64	43	92	63	45
75.	HIGH	2	15	70	2	15	48	2	18	46
	MIDDLE	7	38	141	1	15	43	7	18	43
	LOW	5	16	66	5	9	52	4	18	46
	TOTAL	14	69	277	8	39	143	13	54	135

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
76.	HIGH	39	37	11	34*	24*	8	33	27	6
	MIDDLE	81	81	24	30	34	9	30	30	9
	LOW	40	37	10	26*	35*	5	29	30	8
	TOTAL	160	155	45	90	93	22	92	87	23
77.	HIGH	33*	38*	18*	22	29*	14*	29	23	13
	MIDDLE	71	67	48	25	29	24	23	22	24
	LOW	42*	23*	25*	28	16*	23*	26	24	17
	TOTAL	146	128	91	75	74	61	78	69	54
78.	HIGH	11	26	53	10	16	40	12	16	37
	MIDDLE	23	51	112	8	20	31	13	24	31
	LOW	12	27	49	9	20	36	10	20	37
	TOTAL	46	104	214	27	56	107	35	60	105
79.	HIGH	38	29*	21*	33	20*	13	23	25	13
	MIDDLE	90	66	30	32	19	17	30	22	17
	LOW	36	36*	15*	30	27*	10	31	23	13
	TOTAL	164	131	66	95	66	40	84	70	48
80.	HIGH	51*	27*	8	37	24	4	38	19*	8
	MIDDLE	105	62	19	46	14	14	40	14	14
	LOW	59*	20*	8	31	30	6	35	28*	4
	TOTAL	215	109	35	114	68	24	113	61	26
81.	HIGH	20	42*	23*	12	24	29	12	34*	19*
	MIDDLE	49	95	41	10	36	23	8	38	23
	LOW	17	56	14*	16	27	23	13	25*	28*
	TOTAL	86	193	78	38	87	75	33	97	70

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
82.	HIGH	11	14*	62*	15	17*	34*	14	15	37
	MIDDLE	28	25	133	10	17	34	18	16	34
	LOW	9	9*	69*	15	8*	43*	19	14	34
	TOTAL	48	48	264	40	42	111	51	45	105
83.	HIGH	26	39	24	23	24	18	26	26	14
	MIDDLE	73	66	48	25	27	20	21	28	20
	LOW	26	41	21	25	28	12	21	28	18
	TOTAL	125	146	93	73	79	50	68	82	52
84.	HIGH	16*	34	38*	23	25	18	24	29	13
	MIDDLE	47	74	66	22	25	18	27	23	18
	LOW	30*	29	29*	22	25	19	18	29	20
	TOTAL	93	137	133	67	75	55	69	81	51
85.	HIGH	41*	18	29*	19	16	30	18*	10	38*
	MIDDLE	65	49	72	22	15	31	19	18	31
	LOW	29*	19	39*	23	11	32	28*	10	29*
	TOTAL	135	86	140	64	42	93	65	38	98
86.	HIGH	26	29	31	11	29	25	15	23	28
	MIDDLE	59	60	64	17	23	21	17	31	21
	LOW	29	29	29	17	23	27	15	31	20
	TOTAL	114	118	124	45	75	73	47	85	69
87.	HIGH	30	18*	33*	28	16	21	29*	14	23*
	MIDDLE	68	43	75	22	20	32	22	14	32
	LOW	27	31*	29*	25	16	25	21*	12	33*
	TOTAL	125	92	142	75	52	78	72	40	88

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
88.	HIGH	27	35*	23*	26	20	19	20*	28	17
	MIDDLE	56	77	52	25	24	17	28	23	17
	LOW	29	26*	32*	21	26	18	31*	23	14
	TOTAL	112	138	107	72	70	54	79	74	48
89.	HIGH	25*	28	34*	33	18*	14	38	14	14
	MIDDLE	64	62	60	34	20	8	36	24	8
	LOW	39*	26	22*	29	26*	11	34	19	14
	TOTAL	128	116	116	96	64	33	108	57	36
90.	HIGH	15	29	35*	8	21	36	4	32	30*
	MIDDLE	22	62	94	8	22	43	6	18	43
	LOW	12	29	45*	5	22	39	4	25	37*
	TOTAL	49	120	174	21	65	118	14	75	110
91.	HIGH	42	24*	15	24*	26*	15	22	20	23*
	MIDDLE	97	56	32	27	26	15	28	23	15
	LOW	36	31*	21	31*	16*	17	30	23	14*
	TOTAL	175	111	68	82	68	47	80	66	52
92.	HIGH	28	33	23	14*	35*	17	18	23	22*
	MIDDLE	59	75	51	20	27	28	15	24	28
	LOW	35	28	25	25*	19*	21	12	26	27*
	TOTAL	122	136	99	59	81	66	45	73	77
93.	HIGH	25	31	27	18	22*	26	19	25	21
	MIDDLE	63	74	49	17	26	23	16	29	23
	LOW	28	36	23	17	28*	18	15	29	22
	TOTAL	116	141	99	52	76	67	50	83	66

		Class 15			Class 90			Class 91		
ITEM No.	GROUP	A	B	C	A	B	C	A	B	C
94.	HIGH	27	19	41	33*	8	23	27*	15	23
	MIDDLE	60	35	92	30	15	19	36	13	19
	LOW	22	21	45	21*	15	29	40*	11	15
	TOTAL	109	75	178	84	38	71	103	39	57
95.	HIGH	4	17	63	2	11*	51	2	13*	47
	MIDDLE	5	47	134	3	15	49	3	16	49
	LOW	2	17	68	3	17*	44	1	21*	44
	TOTAL	11	81	265	8	43	144	6	52	140
96.	HIGH	2	65	18	2	52*	11	3	47	15
	MIDDLE	2	135	49	0	50	16	5	47	16
	LOW	0	68	18	2	41*	17	1	44	21
	TOTAL	4	268	85	4	143	44	9	138	52
97.	HIGH	79	2	6	60	2	3	59	2	4
	MIDDLE	176	3	7	63	1	6	59	3	6
	LOW	83	0	4	60	4	1	64	2	1
	TOTAL	338	5	17	183	7	10	182	7	11
98.	HIGH	18*	34	34	13*	23	30	8	15*	42*
	MIDDLE	56	58	72	14	25	40	13	15	40
	LOW	28*	29	30	20*	20	25	10	24*	32*
	TOTAL	102	121	136	47	68	95	31	54	114
99.	HIGH	50	26	11	36*	22*	8	34	24*	6
	MIDDLE	92	66	28	35	18	9	33	25	9
	LOW	45	26	16	27*	28*	11	33	30*	5
	TOTAL	187	118	55	98	68	28	100	79	20

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
100.	HIGH	16	24*	45	14	21	29	21	25*	19*
	MIDDLE	33	60	92	18	24	21	21	26	21
	LOW	11	32*	44	18	21	26	24	14*	23*
	TOTAL	60	116	181	50	66	76	66	65	63
101.	HIGH	5*	22*	59	7	22*	37*	21*	14	30
	MIDDLE	26	45	128	11	20	37	13	17	37
	LOW	11*	12*	64	7	13*	45*	15*	18	33
	TOTAL	42	79	251	25	55	119	49	49	100
102.	HIGH	55	23*	9	47	15	3	33*	26	6
	MIDDLE	118	54	8	46	18	3	40	25	3
	LOW	51	33*	3	39	22	3	42*	19	6
	TOTAL	224	110	20	132	55	9	115	70	15
103.	HIGH	25	40	22	9*	29	23*	9	26	29
	MIDDLE	33	100	53	11	29	29	14	25	29
	LOW	25	40	22	16*	30	18*	10	30	27
	TOTAL	83	180	97	36	88	75	33	81	85
104.	HIGH	6	23	59	2	8	55*	4	13	48
	MIDDLE	9	57	119	1	13	46	5	17	46
	LOW	10	20	58	3	13	47*	2	15	49
	TOTAL	25	100	236	6	34	148	11	45	143
105.	HIGH	1*	57	30	1	42*	23*	4	35	27
	MIDDLE	10	106	60	1	40	28	6	34	28
	LOW	6*	53	29	2	34*	30*	6	29	31
	TOTAL	17	216	119	4	116	81	16	98	86

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
106.	HIGH	19	58	12	8	46*	11	6	40	20
	MIDDLE	35	120	31	3	41	26	5	36	26
	LOW	16	61	10	14	34*	18	12	36	19
	TOTAL	70	239	53	25	121	55	23	112	65
107.	HIGH	67*	16*	5	44	17	3	51*	14	1
	MIDDLE	126	58	4	41	24	2	45	21	2
	LOW	59*	27*	3	44	18	3	46*	18	3
	TOTAL	252	101	12	129	59	8	142	53	6
108.	HIGH	2	24	61	2	18	46	2	17	46
	MIDDLE	3	48	134	0	20	45	0	23	45
	LOW	3	29	56	2	15	48	1	15	50
	TOTAL	8	101	251	4	53	139	3	55	141
109.	HIGH	10	42*	35	12	40	14	12	43	11
	MIDDLE	20	101	64	10	40	14	16	38	14
	LOW	6	52*	30	12	35	19	14	45	10
	TOTAL	36	195	129	34	115	47	42	126	35
110.	HIGH	23	53	13	17	45	4	26	38	2
	MIDDLE	50	110	16	25	36	5	21	42	5
	LOW	28	53	7	22	38	6	24	40	4
	TOTAL	101	216	36	64	119	15	71	120	11
111.	HIGH	1	10	76	0	2	64	1	2	61
	MIDDLE	3	21	155	0	3	64	1	2	64
	LOW	2	4	82	2	1	63	0	2	63
	TOTAL	6	35	313	2	6	191	2	6	188

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
112.	HIGH	7	16	65*	6*	22*	40	1	26*	38
	MIDDLE	19	38	127	5	17	46	8	14	46
	LOW	12	18	57*	11*	15*	40	6	16*	45
	TOTAL	38	72	249	22	54	126	15	56	129
113.	HIGH	4	50	33	5	24*	37*	3	31	32
	MIDDLE	10	104	70	6	26	37	3	28	37
	LOW	8	44	35	2	43*	20*	6	24	36
	TOTAL	22	198	138	13	93	94	12	83	105
114.	HIGH	33	38	18	18	27	21	26	28	12
	MIDDLE	55	91	38	20	28	14	24	30	14
	LOW	28	37	24	17	29	19	27	26	14
	TOTAL	116	166	80	55	84	54	77	84	40
115.	HIGH	47	32	9	25	31	10	29	21	16
	MIDDLE	86	75	24	22	33	12	25	31	12
	LOW	47	32	8	25	31	11	28	26	13
	TOTAL	180	139	41	72	95	33	82	78	41
116.	HIGH	19	28	41	17	17	32*	12*	28	27*
	MIDDLE	48	51	86	17	24	19	21	28	19
	LOW	25	23	39	22	20	23*	25*	24	18*
	TOTAL	92	102	166	56	61	74	58	80	64
117.	HIGH	10	16	61	1*	17*	48	4	8	53
	MIDDLE	16	27	142	6	10	52	4	12	52
	LOW	8	17	64	12*	7*	47	4	7	55
	TOTAL	34	60	267	19	34	147	12	27	160

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
118.	HIGH	13	25	48	4*	23	41*	7	27	32
	MIDDLE	26	59	99	11	15	37	9	22	37
	LOW	13	28	46	13*	22	31*	8	21	38
	TOTAL	52	112	193	28	60	109	24	70	107
119.	HIGH	50*	29	9*	30	27	10	41	16	9
	MIDDLE	98	56	29	46	11	7	38	23	7
	LOW	42*	28	16*	31	24	10	44	16	6
	TOTAL	190	113	54	107	62	27	123	55	22
120.	HIGH	25	35	27	5	25	37	8	22	37
	MIDDLE	52	72	57	10	16	43	5	19	43
	LOW	25	31	30	12	22	29	12	25	30
	TOTAL	102	138	114	27	63	109	25	66	110
121.	HIGH	19	37*	28*	3	18	45	6	17	42
	MIDDLE	39	62	79	6	18	38	7	21	38
	LOW	15	30*	43*	7	17	40	8	19	40
	TOTAL	73	129	150	16	53	123	21	57	120
122.	HIGH	12	26	47	1	16	49	0	13	51
	MIDDLE	23	70	87	2	19	53	4	11	53
	LOW	8	27	53	2	18	44	6	12	47
	TOTAL	43	123	187	5	53	146	10	36	151
123.	HIGH	36*	34*	17	39	23	3	31	26	9
	MIDDLE	59	83	44	35	22	8	37	23	8
	LOW	28*	44*	15	43	18	4	28	29	10
	TOTAL	123	161	76	117	63	15	96	78	27

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
124.	HIGH	4	34	51	1	25	40	1	26	37
	MIDDLE	17	68	103	1	23	46	4	18	46
	LOW	4	33	50	3	23	39	2	24	40
	TOTAL	25	135	204	5	71	125	7	68	123
125.	HIGH	4	29	54	1	26	38	1	21	43
	MIDDLE	8	56	120	1	21	46	2	20	46
	LOW	5	26	57	5	24	35	6	13	47
	TOTAL	17	111	231	7	71	119	9	54	136
126.	HIGH	3	6	78	4	26*	35	3	21*	39*
	MIDDLE	1	19	165	6	17	51	1	16	51
	LOW	3	7	77	3	19*	40	0	13*	52*
	TOTAL	7	32	320	13	62	126	4	50	142
127.	HIGH	39	38	12	9	37	20	15	41	8
	MIDDLE	71	97	17	17	41	12	24	31	12
	LOW	38	41	8	16	35	12	26	33	9
	TOTAL	148	176	37	42	113	44	65	105	29
128.	HIGH	73	13	2	38*	20	7	42	16	5
	MIDDLE	141	36	7	45	16	14	36	16	14
	LOW	71	12	3	49*	11	7	38	16	13
	TOTAL	285	61	12	132	47	28	116	48	32
129.	HIGH	0	1	86	1	2	63	0	1	64
	MIDDLE	0	4	181	2	4	64	2	2	64
	LOW	0	2	85	1	1	62	2	1	64
	TOTAL	0	7	352	4	7	189	4	4	192

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
130.	HIGH	27	58	3	14*	46*	7	18*	38*	9
	MIDDLE	61	128	8	21	40	11	20	35	11
	LOW	27	57	4	23*	35*	8	30*	26*	11
	TOTAL	115	243	15	58	121	26	68	99	31
131.	HIGH	3	10	74	2	15*	49	4	6	55*
	MIDDLE	5	30	150	0	7	52	4	12	52
	LOW	1	12	75	5	5*	53	7	13	46*
	TOTAL	9	52	299	7	27	154	15	31	153
132.	HIGH	28	41	18	10	23	32	16	22	26
	MIDDLE	49	78	60	15	29	28	20	19	28
	LOW	26	40	22	18	22	27	14	25	28
	TOTAL	103	159	100	43	74	87	50	66	82
133.	HIGH	3	16	67	3	10	53	4	10	52
	MIDDLE	11	29	145	5	6	58	2	8	58
	LOW	3	13	72	6	7	48	4	16	46
	TOTAL	17	58	284	14	23	159	10	34	156
134.	HIGH	24*	28	34	12	27	26	17*	27*	21
	MIDDLE	45	63	80	17	22	28	20	20	28
	LOW	30*	27	30	14	22	27	24*	21*	21
	TOTAL	99	118	144	43	71	81	61	68	70
135.	HIGH	40*	39	8*	37*	20	8	35	24	7
	MIDDLE	83	84	18	35	25	5	28	34	5
	LOW	26*	44	18*	26*	26	12	40	21	6
	TOTAL	149	167	44	98	71	25	103	79	18

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
136.	HIGH	23	36	25	7*	28	29	9	19	37
	MIDDLE	51	70	65	14	27	37	9	22	37
	LOW	21	38	26	19*	22	21	11	19	37
	TOTAL	95	144	116	40	77	87	29	60	111
137.	HIGH	6	39*	42*	5	11	49	6	18	41
	MIDDLE	10	62	113	6	13	51	2	15	51
	LOW	4	27*	56*	5	16	42	7	12	47
	TOTAL	20	126	211	16	40	142	15	45	139
138.	HIGH	51	30	6	25*	32*	9	21	23	20
	MIDDLE	109	54	23	30	27	22	27	18	22
	LOW	53	25	10	32*	19*	14	22	26	19
	TOTAL	213	109	39	87	78	45	70	67	61
139.	HIGH	25	27*	34*	11*	21	34*	14	23*	28
	MIDDLE	42	71	72	15	20	29	21	18	29
	LOW	26	16*	46*	23*	19	24*	17	15*	34
	TOTAL	93	114	152	49	60	87	52	56	91
140.	HIGH	15*	18	53	12	19*	35	21	16	28*
	MIDDLE	49	49	88	12	15	39	18	11	39
	LOW	25*	16	46	18	12*	35	15	11	40*
	TOTAL	89	83	187	42	46	109	54	38	107
141.	HIGH	24	38	25	18	23	25	18	29	19
	MIDDLE	50	85	51	21	24	12	19	37	12
	LOW	21	43	24	18	25	23	16	32	19
	TOTAL	95	166	100	57	72	60	53	98	50
142.	HIGH	1	17	68	1	6	58	0	16	49
	MIDDLE	2	37	146	2	6	58	1	3	58
	LOW	1	16	70	1	8	55	1	16	49
	TOTAL	4	70	284	4	20	171	2	40	156

		Class 15			Class 90			Class 91		
ITEM NO.	GROUP	A	B	C	A	B	C	A	B	C
143.	HIGH	71	15*	1	44	18*	4	54	8	4
	MIDDLE	150	27	9	51	13	4	48	16	4
	LOW	76	7*	5	52	8*	7	47	15	5
	TOTAL	297	49	15	147	39	15	149	39	13
144.	HIGH	14	15*	57	12	12	42	7	21	38
	MIDDLE	19	50	128	8	13	37	8	25	37
	LOW	10	23*	53	8	16	41	11	13	42
	TOTAL	42	88	238	28	41	120	26	59	117
145.	HIGH	6	25	55	2	7	56	3	9	54
	MIDDLE	18	44	123	3	10	56	1	11	56
	LOW	8	19	60	1	8	55	10	10	46
	TOTAL	32	88	238	6	25	167	14	30	156
146.	HIGH	21*	50	15	15	42	9	15	40	9
	MIDDLE	62	108	16	14	37	12	15	39	12
	LOW	31*	44	13	18	44	3	14	44	9
	TOTAL	114	202	44	47	123	24	44	123	30
147.	HIGH	16	51	20	11	46	10	8*	45*	12
	MIDDLE	49	106	30	14	40	14	17	35	14
	LOW	18	48	22	15	41	10	18*	38*	11
	TOTAL	83	205	72	40	127	34	43	118	37
148.	HIGH	3	7	76	0	12	54*	2	10	51*
	MIDDLE	4	19	161	0	5	54	0	11	54
	LOW	2	12	75	0	5	59*	1	4	61*
	TOTAL	9	38	312	0	22	167	3	25	166
149.	HIGH	1	27	58	2	19*	45*	2	15	47*
	MIDDLE	7	51	126	2	10	41	5	21	41
	LOW	3	23	62	3	8*	53*	0	13	53*
	TOTAL	11	101	246	7	37	139	7	49	141
150.	HIGH	54	28	4	35	23	8	34	22	8
	MIDDLE	111	56	17	38	23	7	37	22	7
	LOW	50	33	5	36	22	8	37	22	8
	TOTAL	215	117	26	109	68	23	108	66	23

Table II

Item Alternative Responses for which the Differences between Upper and Lower Groups Showed a C. R. equal to or Greater than 2 in at least one Sample.

(Negative sign indicates percent in low group choosing the alternative exceeded the percent in the high group)

Item	Belvoir, Class 15	Benning, Class 90	Benning, Class 91	Item	Belvoir, Class 15	Benning, Class 90	Benning, Class 91
2	-B, C	-B	-C	82		B	-
3	B			84	-A		
7			B	87	-B		
15		C		88			-A
18	B			89	-A, C		
20	B			91		B	
21		A		92		-A	
24		C		94		-A	-A
30			-A	96		B	
31	-A,B			100			B
32			-A	106		B	
33			-B	107	-B		
35			B	113		-B, C	
36			-B	116			-A
39			-A	117		-A, B	
41			-B	118	-A		
56	-B		C	121	-C		
57		-C		126			-C
59		A		128		-A	
61		-A		130		B	-A,B
62		C		131		B	
63		A	-A	135	A	A	
64		B		136		-A	
66		-A	-C	137	-C		
68	A			138		B	
69			-B	139	B	-A,C	
70			-A	140			-C
72			-A	143		B	
76		-B		147			-A
77	B	B		148			-C
81	-B			149		B	

Table III. Item Alternative Responses Chosen to Comprise Scoring Key; Percentages of each Sample Responding, Significance and Sign of Response

(Responses with positive CR's were scored +1 and those with negative CR's were scored -1)

	Belv., Cl.15			Ben., Cl. 90			Ben., Cl. 91		
Response	High	Low	C. R.	High	Low	C. R.	High	Low	C. R.
1A	39	40	-.1	45	32	1.6	50	35	1.7
3A	48	57	-1.2	47	62	-1.7	38	36	.2
3B	28	15	2.0	27	18	1.3	30	27	.4
6D	11	16	-.9	6	14	-1.6	8	12	-.8
7D	44	52	-1.0	72	71	.1	42	56	-1.6
10A	70	74	-.6	48	58	-1.1	47	61	-1.6
10B	23	20	.4	36	23	1.6	38	26	1.5
11C	31	28	.4	44	38	.8	36	27	1.1
11D	59	61	-.3	45	50	-.5	55	68	-1.6
13D	7	15	-1.6	8	14	-1.1	5	8	-.6
15A	22	33	-1.6	24	35	-1.1	27	30	-.4
16B	24	32	-1.1	23	24	-.1	30	32	-.3
16D	19	13	1.0	18	17	.1	20	14	.9
18A	36	50	-1.9	20	21	-.1	17	21	-.6
18B	35	19	2.3	17	15	.3	20	18	.3
20B	36	22	2.0	30	24	.8	23	21	.3
22B	31	24	1.0	18	15	.4	20	18	.3
22C	31	39	1.1	39	39	0	45	45	0
23A	13	19	-1.0	2	14	-2.4	6	8	-.4
23B	38	28	1.4	30	20	1.3	17	15	.3
23C	31	28	.4	45	35	1.2	51	39	1.4
23D	19	24	-.7	21	30	-1.1	29	39	-1.2
24D	33	36	-.4	32	48	-1.9	33	38	-.6
30A	23	31	-1.1	30	32	-.2	27	45	-2.2
30B	45	32	1.8	39	33	.8	50	38	1.3
33A	55	47	1.0	33	36	-.4	44	33	1.3
33B	26	38	-1.7	42	39	.3	27	44	-2.1
34B	56	50	.9	45	39	.7	42	39	.3
*36C	31	23	1.1	59	48	1.2	47	41	.7
37C	8	32	.9	44	38	.7	50	45	.6
38A	9	8	.2	14	5	1.8	17	5	2.4
39A	91	94	-.6	85	94	-1.8	82	95	-2.4
39B	9	5	.0	11	3	1.6	14	6	1.6
42A	13	7	1.2	15	15	0	23	12	1.6
42C	42	41	.1	32	42	-1.2	24	38	-1.8
43A	78	84	-1.0	77	77	0	65	76	-1.6
48B	50	40	1.3	59	56	.3	39	33	.8
48C	45	59	-1.8	39	39	0	59	69	-1.1
54B	13	13	0	12	20	-1.3	12	24	-1.9
54C	84	83	.1	81	77	.6	86	75	1.6
** 56C	45	35	1.4	38	29	1.1	39	20	2.3
57B	38	33	.7	36	23	1.6	35	36	-.1
57C	44	47	-.4	45	62	-2.0	41	53	-1.4
59A	26	22	.7	39	21	2.2	44	44	0
61A	26	32	-.9	20	35	-2.0	14	20	-.9
61B	35	32	.4	29	21	1.0	32	27	.6
62B	13	19	-1.0	12	24	-1.7	12	15	-.5
62C	81	77	.7	86	64	3.1	80	80	0
64C	5	11	-1.2	9	21	-1.7	8	11	-.5
68A	31	17	2.3	38	26	1.5	42	35	.8
68C	30	43	-1.9	26	20	.8	21	38	-2.1
*37A	15	20	-.8	8	11	-.6	6	15	-1.4

Response	Belv., Cl.15 High	Low	C.R.	Ben., Cl. 90 High	Low	C.R.	Ben., Cl.91 High	Low	C.R.
56B	28	45	-2.4	47	51	.4	38	48	-1.1

**Line omitted:

Response	Belv., Cl. 15 High	Low	C.R.	Ben. Cl. 90 High	Low	C.R.	Ben., Cl. 91 High	Low	C. R.
69C	15	9	1.0	27	21	.8	30	24	.8
70A	21	25	-.7	23	21	.2	15	30	-2.1
71B	24	18	1.0	23	18	.6	27	18	1.3
71C	69	75	-.9	69	77	-1.0	66	77	-1.4
72A	61	64	-.4	50	56	-.7	39	56	-7.0
72C	11	9	.4	15	14	.1	21	11	1.4
73A	27	28	.2	42	36	.7	55	39	1.8
73B	47	52	-.6	42	51	-1.0	32	47	-1.9
76A	44	45	-.1	51	39	1.4	50	44	.7
76B	42	42	0	36	53	-2.0	41	45	-.5
77B	43	26	2.4	44	24	2.5	35	36	-.1
77C	20	28	-1.3	21	35	-1.8	20	26	-.8
78B	30	31	.1	24	30	-.8	24	30	.8
79C	24	17	1.1	20	15	.6	27	20	.9
82B	16	10	1.0	26	12	2.0	23	21	.2
87A	34	32	.3	42	38	.5	44	32	1.5
89C	39	25	2.0	21	17	.5	21	21	0
90C	40	51	-1.4	54	59	-.5	45	55	-1.1
92C	26	28	-.3	26	32	-.8	33	41	-1.0
93B	35	41	-.9	33	42	-1.1	38	44	-.8
95B	19	19	0	17	26	-1.1	23	32	-1.1
98A	20	32	-1.7	20	30	-1.2	12	15	-.4
98C	39	34	.7	45	38	.9	64	48	1.8
99A	57	51	.8	55	41	1.7	52	50	.3
99B	30	30	0	33	42	-1.1	36	45	-1.0
101C	67	73	-.9	56	68	-1.3	45	50	-.5
103A	28	28	0	14	24	-1.4	14	15	-.2
103C	25	25	0	42	27	1.9	44	41	.3
105A	1	7	-1.2	2	3	-.2	6	9	-.6
105B	65	60	.6	63	51	1.3	52	44	.9
107A	76	67	1.3	66	66	0	77	69	1.0
107B	18	31	-2.0	26	27	-.1	21	27	-.8
112A	8	13	-.9	9	17	-1.1	2	9	-1.4
112B	18	20	-.3	33	23	1.3	39	24	1.9
116A	22	28	-.9	26	33	-.9	18	38	-2.5
116C	47	44	.4	48	35	1.5	41	27	1.8
118A	15	15	0	6	22	-2.3	11	12	-.1
126C	89	88	.2	53	60	-.8	59	79	-2.2
130A	31	31	0	21	35	-1.8	27	45	-2.3
130B	56	65	.1	70	53	2.1	58	39	2.1
134A	27	34	-1.0	18	21	-.4	26	36	-1.2
134B	32	31	.1	41	33	.9	41	32	1.1
135A	45	30	2.0	56	39	2.0	53	60	-.8
136A	26	24	.3	11	29	-2.6	14	17	-.4
138A	58	60	-.3	38	48	-1.1	32	33	-.1
138B	34	28	.9	48	29	2.1	35	39	.4
139A	28	30	-.3	17	35	-2.3	21	26	-.6
139B	31	18	2.0	32	29	.4	35	23	1.5
140B	20	18	.3	29	18	1.6	24	17	1.0
147A	18	20	-.3	17	23	-.9	12	27	-2.1
147B	58	55	.4	69	63	.7	68	57	1.2
148C	86	85	.2	81	89	-1.1	77	92	-2.5
149B	31	26	.7	29	12	2.4	23	20	.4
149C	60	70	-.6	68	80	-1.7	71	80	-1.3

Table IV. Intercorrelations, Means, and Standard Deviations of OCT, L-1, X-1 and Leadership Ranks for Classes 90 and 91 at Fort Benning, Georgia

	Class #90 r's			Class #91 r's		
	OCT	L-1, X-1	Leadership Rank	OCT	L-1, X-1	Leadership Rank
OCT		.14	-.13		.07	-.12
L-1, X-1		-	-.41		-	-.42
N	199	199	199	201	201	201
M	123.0	-1.4	101.2	122.6	-1.0	105.3
σ	11.8	8.3	58.6	10.8	8.0	60.4

Table V. Mean L-1, X-1 Scores Attained by Men in Low Groups who Pass or Fail on Leadership Ratings

Class	Belvoir OCS #15		Benning OCS #90		Benning OCS #91	
Leadership Rating	Fail	Pass	Fail	Pass	Fail	Pass
N	34	53	30	36	29	38
M	-8.0	-5.9	-6.2	-5.6	-5.6	-4.0
σ	6.6	6.6	5.9	6.0	6.2	7.1
C. R.	1.4		.4		1.0	