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RANK DIFFERENCES, AND SQUARES ARE GIVEN FOR THE DETERMINATION of P. FOR SPEARMAN AND OTIS

Name	AGE Y. M.	INTELLIGENCE TESTS — SPEARMAN MARK/ORDER	OTIS MARK/ORDER	d	d^2	I TOTAL/ORDER	TESTS
ALLAN A	14.4	121 / 62.5	131 / 102.5	40	1600	252 / 87	
ALLEN H	12.7	121 / 62.5	184 / 6.5	56	3136	305 / 15	
APPLEBY R	13.11	115 / 79.5	141 / 88	8.5	72.25	256 / 82	
ARMSTRONG J	13.10	119 / 69.5	166 / 29	40.5	1640.25	285 / 41	
ALLSOP J	13.6	120 / 67	147 / 72.5	5.5	30.25	267 / 67	
AYNSLEY H	14.1	137 / 14	157 / 46.5	32.5	1056.25	294 / 21.5	
BEAL A	12.7	118 / 73	149 / 70	3	9	267 / 67	
BENNET J	14.1	121 / 62.5	149 / 70	7.5	56.25	270 / 60	
BLAKEY L	12.11	137 / 14	156 / 48.5	34.5	1190.25	293 / 29.5	
BRITTAN N	12.10	145 / 3	183 / 8	5	25	328 / 4.5	
BROWN P	13.2	126 / 50.5	164 / 33	17.5	306.25	289 / 36.5	
CARR J	13.3	140 / 9	184 / 6.5	2.5	6.25	324 / 6	
CARMICHAEL N	13.8	108 / 95.5	150 / 67	28.5	812.25	258 / 80	
CAMPBELL K	13.8	115 / 79.5	150 / 67	12.5	156.25	265 / 71	
CARPENTER R	13.9	109 / 92	159 / 42	50	2500	268 / 64.5	
CLARK H	13.10	117 / 75.5	134 / 100	24.5	600.25	251 / 89.5	
COOK A	14.1	131 / 31.5	167 / 26	5.5	30.25	298 / 23.5	
COWAN R	13.3	107 / 98.5	146 / 75	23.5	552.25	253 / 86.5	
CURRY G	13.3	133 / 22.5	182 / 9	13.5	182.25	315 / 11	
CROUDACE J	13.6	119 / 69.5	167 / 26	43.5	1892.25	286 / 39	
DARLING P	13.11	102 / 107.5	136 / 97.5	10	100	238 / 100	
DAVISON L	13.1	113 / 84	111 / 123	39	1521	224 / 112	
DOBSON K	13.7	133 / 22.5	179 / 12.5	10	100	312 / 12	
DOUGHTY H	13.9	129 / 57.5	165 / 31.5	26	676	287 / 38	
DUNCAN J	13.9	127 / 43	149 / 70	27	729	276 / 56.5	
ELLIOT F	13.9	117 / 75.5	152 / 60	15.5	240.25	269 / 62	
ELLIS W	13.10	130 / 35.5	153 / 55.5	20	400	283 / 45.5	
FISHER A	14.1	132 / 26.5	166 / 29	2.5	6.25	298 / 23.5	
FINDLAY J	14.1	101 / 110	142 / 84	26	676	243 / 94.5	
FLETCHER G	13.6	127 / 43	161 / 38	5	25	288 / 36.5	
FRANKS H	13.6	105 / 102.5	152 / 60	42.5	1806.25	257 / 81	
FROST J	14.0	101 / 110	130 / 105	5	25	231 / 107	
GARDINER R	13.2	155 / 1	192 / 3	2	4	347 / 1	
GLOVER A	13.9	77 / 127	112 / 121	6	36	189 / 126	
GRAINGER E	14.0	133 / 22.5	187 / 4.5	18	324	320 / 7	
GRAY D	13.9	91 / 118.5	127 / 108.5	10	100	218 / 117	
GIBSON W	13.1	143 / 4.5	173 / 17	12.5	156.25	316 / 9.5	
GOWLAND H	13.11	110 / 89	126 / 110	21	441	236 / 104	
GRICE J	13.2	138 / 11	152 / 60	49	2401	290 / 33	
HALL R	13.3	111 / 86.5	131 / 102.5	18	324	252 / 87	
HARDY R	13.2	139 / 10	180 / 11	1	1	319 / 8	
HILL R	13.8	123 / 55	144 / 78	23	529	267 / 67	
HARDING D	14.9	88 / 123	136 / 97.5	25.5	650.25	224 / 116	
HEATHERINGTON A.	13.1	123 / 55	123 / 113	58	3364	246 / 92	
HEDWORTH J	14.6	131 / 31.5	168 / 23	8.5	72.25	299 / 22	
HORNSBY S	13.10	125 / 50.5	168 / 23	27.5	756.25	293 / 29.5	
HOWE M	13.10	123 / 55	160 / 39.5	15.5	240.25	283 / 45.5	
HOWE R	14.5	98 / 112	127 / 108.5	3.5	12.25	225 / 111	
HUNTER G	13.11	103 / 105	158 / 44.5	60.5	3660.25	261 / 77	
HUNTER J	13.10	127 / 43	153 / 55.5	12.5	156.25	280 / 52	
HUDDLESTONE N	13.4	137 / 14	138 / 95	81	6561	275 / 58	
HUGHES F	13.11	128 / 39	179 / 19	20	400	280 / 52	
HYSLOP D	14.6	115 / 79.5	146 / 75	4.5	20.25	261 / 77	
INNES R	13.8	134 / 20	159 / 42	32	1024	288 / 36.5	
JOHNSON W	12.11	131 / 31.5	166 / 29	2.5	6.25	297 / 25.5	
JEFFERSON R	13.7	121 / 62.5	107 / 126	63.5	4032.25	228 / 109.5	
KERSLEY S	13.2	149 / 6	162 / 36.5	30.5	930.25	304 / 17	
KINGHORN W	13.6	93 / 115	109 / 124.5	9.5	90.25	202 / 123	
KIRCUP K	13.8	91 / 118.5	118 / 116.5	2	4	209 / 120	
KNOX W	13.1	106 / 100.5	143 / 81	19.5	380.25	249 / 91	
LANE B	13.4	108 / 95.5	181 / 64	31.5	992.25	269 / 74	
LEACH A	13.6	143 / 4.5	157 / 46.5	42	1764	300 / 21	
LITTLE D	13.6	124 / 52.5	167 / 26	26.5	702.25	291 / 31.5	
LOWSON J	13.1	115 / 79.5	139 / 92	12.5	156.25	254 / 83	
MANN E	13.6	110 / 89	141 / 88	1	1	251 / 89.5	
MALLABURN R	14.2	124 / 52.5	170 / 20.5	32	1024	294 / 21.5	
MAXWELL A	13.8	115 / 79.5	151 / 64	15.5	240.25	266 / 69	
MARSH S	13.5	131 / 31.5	152 / 60	28.5	812.25	283 / 45.5	
McCALLA A	13.4	148 / 2	173 / 17	15	225	321 / 11.5	
McCULLEY K	13.10	89 / 121	153 / 55.5	65.5	4290.25	242 / 96	
MELVIN S	13.7	130 / 35.5	150 / 67	31.5	992.25	280 / 52	
MINNIKIN R	13.4	121 / 62.5	163 / 34.5	28	784	284 / 43	
MOLE H	13.8	93 / 115	128 / 107	8	64	221 / 114.5	
NAYLOR R	13.4	141 / 7.5	187 / 4.5	3	9	328 / 4.5	
NEIL T	13.8	141 / 7.5	163 / 34.5	27	729	304 / 17	

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| | | .55 | .57 | | .04 | | |

		SPEARMAN ↓		OTIS ↓		RANK DIFFERENCE ↓	(RANK DIFFERENCE)² ↓	JOINT LIST I	

	AGE	INTELLIGENCE TESTS							
	Y.M	SPEARMAN MARK	ORDER	OTIS MARK	ORDER	d	d²	TOTAL	ORDER
NICHOLSON H	13.0	132	26.5	159	42	15.5	240.25	291	31.5
PARKER R	13.11	93	115	141	88	27	729	234	105
PARKER N	13.7	85	122	102	127	5	25	187	127.5
PEART J	14.1	126	48	139	92	44	1936	265	71
PATTERSON J	13.10	127	43	158	44.5	1.5	2.25	285	41
PETERS A	15.0	127	43	162	36.5	6.5	42.25	289	34.5
PRINGLE R	13.9	102	107.5	135	99	8.5	72.25	237	102.5
PRITCHARD K	13.4	103	105	112	121	16	256	215	118
RICHARDSON A	14.1	118	73	151	64	9	81	269	62
RICHARDSON G.H.	13.5	127	43	174	15	28	748	301	20
RICHARDSON A.C	13.11	135	18	146	75	57	3249	281	149.5
RICHMOND H	13.1	76	127	114	119	8	64	190	124.5
RICKLETON J	13.10	108	95.5	144	78	17.5	306.25	252	87
RAWSON A	13.11	105	102.5	138	95	7.5	56.25	243	94.5
REED B	13.11	113	84	96	128	44	1936	209	120
ROBINSON J	13.8	132	26.5	139	92	34.5	1190.25	271	59
ROBERTSON R	13.7	133	22.5	173	17	5.5	30.25	306	14
ROBERTSON A	13.3	137	14	193	3	12	144	330	3
ROBSON J	13.1	137	14	202	1	13	169	339	2
ROSENBLOOM B	13.10	118	73	165	31.5	41.5	1722.25	283	35.5
ROWELL C	14.6	109	92	131	102.5	10.5	110.25	240	98
RUSSELL H	13.8	115	79.5	138	95	15.5	240.25	263	84.5
SALKELD B	13.9	122	57.5	141	88	30.5	930.25	263	74
SCOTT W	13.11	80	125	142	84	42	1764	222	113
SINCLAIR E	13.5	101	110	143	81	29	841	244	93
SHARPE F	14.3	107	98.5	131	102.5	4	16	238	100
SPIRES H	13.3	119	69.5	159	42	27.5	756.25	278	65
STOBBS S	14.4	72	128	115	118	10	100	187	127.5
STORY A	14.2	91	118.5	147	72.5	46	2116	238	100
STOKOE W	13.8	111	86.5	121	114	27.5	756.25	232	106
SUNDERLAND C	13.1	129	37.5	175	14	23.5	552.25	304	17
STEPHEN H	14.3	103	105	125	111	6	36	228	109.5
SWAN G	14.2	108	95.5	129	106	10.5	110.25	237	102.5
STEPHENSON A	13.8	110	89	153	53.5	33.5	1122.25	263	74
THOMAS G	13.4	131	31.5	179	12.5	19	361	310	13
TINDALL J	13.11	127	43	154	52	9	81	281	49.5
THOMPSON F	13.1	131	31.5	154	52	20.5	420.25	285	41
TAIT H	13.6	135	18	181	10	8	64	316	9.5
TRUEMANN G	14.1	113	84	158	50	34	1156	268	64.5
TAYLOR R	13.0	109	92	152	60	32	1024	261	77
WHITE A	13.11	121	62.5	144	78	15.5	240.25	265	71
WILSON J	13.6	126	48	156	48.5	.5	.25	282	48
WAKE H	13.8	132	26.5	170	20.5	6	36	302	19
WIGHTMAN D	13.4	91	118.5	118	116.5	2	4	209	120
WIGHTLAY R	13.7	94	113	112	121	8	64	206	122
WILKINSON J	14.5	119	69.5	160	39.5	30	900	279	54
WATSON J	13.3	129	37.5	168	23	14.5	210.25	297	25.5
WALTON H	13.0	126	48	143	81	33	1089	269	62
WALLACE A	13.10	121	62.5	120	115	52.5	2756.25	241	97
WRIGHT E	14.2	81	124	109	129.5	.5	.25	190	124.5
WALTON D	13.4	121	62.5	142	84	21.5	462.25	263	74
WATSON C	13.5	106	100.5	184	112	11.5	132.25	230	108
YARDLEY R	13.9	135	18	141	88	70	4900	276	56.5

AVERAGE AGE	13.8	Σd² 98,008.							
STANDARD DEVIATION 5.2 MTHS.									

DETERMINATION OF ρ.

$$\rho = 1 - \frac{6\Sigma d^2}{N(N^2-1)}$$

N = 128.

Σd² = 98008.

$$\rho = 1 - \frac{6.98008}{2,097,000}$$

$$= 1 - \frac{588048}{2,097,000}$$

$$= 1 - .2804$$

$$= .72 \quad \text{CORRELATION BETWEEN SPEARMAN AND OTIS LISTS.}$$

$$r = .74 \pm .03$$

log 588048 = 5.7694.
log 2,097,000 = 6.3216
log quotient = $\overline{1}$.4478.

NOTE. VALUES OF Σd² HERE, AND THROUGHOUT THIS INVESTIGATION, WERE CALCULATED, AND CHECKED, BY COMPTOMETER.

RANK DIFFERENCES (AND SQUARES) ARE GIVEN WITH RESPECT TO THE FIRST LIST (MR BURNS' LIST).

PENCIL DRAWINGS	MR. BURNS		MR. LOUGHTON				MR. FALLOWS				MR. HERON			
	MARK	POS	MARK	POS	d	d²	MARK	POS	d	d²	MARK	POS	d	d²
ALLAN A	20	25	10	75	50	2500	25	13	12	144	24	31	6	36
	8	94	6	101.5	7.5	56.25	6	120.5	26.5	702.25	13	108	14	196
	15	50	9	77.5	27.5	756.25	14	60.5	10.5	110.25	21	70.5	20.5	420.25
	4	115	3	122	7	49	9	109	6	36	17	88.5	26.5	702.25
	2	121	6	101.5	19.5	380.25	8	123.5	2.5	6.25	15	96.5	26.5	600.25
	10	85.5	15	43	42.5	1806.25	12	82.5	3	9	22	61.5	24	576
	21	21	22	19	2	4	21	28	7	49	24	31	10	100
	15	50	16	45.5	4.5	210.25	22	28.5	27.5	756.25	30	1.5	48.5	2352.25
	9	90	7	85.5	4.5	20.25	11	90.5	.5	.25	18	85	5	25
	23	12.5	26	10.5	2	4	21	28	15.5	240.25	24	31	18.5	342.25
	5	111	4	118	7	49	10	100	11	121	16	93	18	324
	18	37	16	43	6	36	20	36	1	1	24	31	6	36
	12	72	7	85.5	13.5	182.25	15	53	19	361	16	93	21	441
	0	127	1	127	0	0	3	128	1	1	5	127.5	.5	.25
	13	64	7	85.5	21.5	462.25	11	90.5	26.5	702.25	14	100.5	36.5	1332.25
CLARK H	28	3	30	1	2	4	27	6	3	9	28	8	.5	25
	19	30	28	6	24	576	20	36	6	36	26	11	19	361
	24	8.5	14	51	42.5	1806.25	16	48	39.5	1560.25	25	47	38.5	1482.25
	18	37	22	19	18	324	21	28	9	81	23	47	10	100
	0	127	1	127	0	0	8	123.5	3.5	12.25	13	108	19	361
	12	72	6	101.5	29.5	870.25	13	72.5	.5	.25	21	70.5	1.5	2.25
	12	72	15	43	29	841	14	60.5	11.5	132.25	22	61.5	10.5	110.25
	13	64	6	101.5	37.5	1406.25	10	100	36	1296	13	108	44	1936
	7	100	6	101.5	1.5	2.25	10	100	0	0	14	100.5	.5	.25
	10	85.5	14	51	34.5	1190.25	13	72.5	13	169	21	70.5	15	225
	1	126	4	118	6	36	7	117	7	49	12	115	9	81
	18	50	13	58	8	64	14	60.5	10.5	110.25	26	18	32	1024
	7	100	11	69.5	30.5	930.25	17	43	57	3249	17	88.5	11.5	132.25
	12	72	13	58	14	196	14	60.5	11.5	132.25	19	82.5	10.5	110.25
FLETCHER G	18	37	21	22	15	225	23	19	18	324	22	61.5	24.5	600.25
	6	106	7	85.5	20.5	420.25	10	100	6	36	20	77.5	28.5	812.25
	8	111	6	101.5	9.5	90.25	7	117	6	36	20	77.5	33.5	1122.25
	18	37	6	101.5	64.5	4160.25	17	48	6	36.2	12	115	78	6084
	0	127	1	127	0	0	4	126.5	.5	.25	6	126	1	1
	7	100	6	101.5	1.5	2.25	10	100	0	0	11	118.5	18.5	342.25
	23	12.5	24	15	2.5	6.25	27	8	4.5	20.25	25	18	5.5	30.25
	14	57	18	28.5	28.5	812.25	21	28	29	841	23	47	10	100
	19	30	15	43	13	169	27	8	22	484	24	31	1	1
	19	30	18	64	34	1156	12	82.5	52.5	2756.25	23	47	17	289
	8	111	6	101.5	9.5	90.25	13	72.5	38.5	1482.25	9	123	12	144
	17	43	22	19	24	576	14	60.5	17.5	306.25	28	47	4	16
	13	64	7	85.5	21.6	462.25	11	90.5	26.5	702.25	19	82.5	8.5	72.25
	19	30	29	2.5	27.5	756.25	22	22.5	7.5	56.25	23	47	17	289
	10	85.5	18	28.5	57	3249	12	82.5	3	9	28	47	17	289
	17	43	22	19	24	576	25	13	30	900	29	5	38	1444
HOWE M	11	79.5	6	101.5	22	484	7	117	37.5	1406.25	21	70.5	9	81
	10	85.5	4	118	32.5	1056.25	9	109	23.5	552.25	17	88.5	3	9
	12	72	16	35.5	36.5	1332.25	13	72.5	.5	.25	22	61.5	10.5	110.25
	15	50	13	58	8	64	22	22.5	27.5	756.25	24	31.5	18.5	342.25
	9	90	8	80	10	100	12	82.5	7.5	56.25	20	77.5	12.5	156.25
	21	21	15	43	22	484	20	36	15	225	25	18	3	9
	17	43	23	16	27	729	24	16.5	26.5	702.25	24	31	12	144
	15	50	14	51	1	1	16	48	2	4	26	11	39	1521
	14	57	13	58	1	1	16	48	9	81	23	47	10	100
	13	64	18	28.5	35.5	1260.25	18	82.5	18.5	342.25	24	31	33	1089
	3	118	6	101.5	16.5	272.25	9	109	9	81	13	108	10	100
	12	72	10	75.5	3	9	14	60.5	11.5	132.25	22	61.5	10.5	110.25
	2	121	6	101.5	19.5	380.25	10	100	21	441	10	121	0	0
	7	100	5	116.5	16.5	210.25	9	109	9	81	11	118.5	18.5	342.25
KNOX W.	7	100	13	58	42	1764	18	40	60	3600	22	61.5	38.5	1482.25
	1	124	8	122	2	4	4	126.5	2.5	6.25	5	127.5	3.5	12.25
	21	21	14	51	30	900	17	43	22	484	23	47	26	676
	16	46	18	28.5	17.5	306.25	12	82.5	26.5	1332.25	22	61.5	15.5	240.25
	23	12.5	25	13	.5	.25	24	16.5	4	16	23	47	34.5	1190.25
	4	115	2	124.5	9.5	90.25	10	100	15	225	16	93	22	484
	19	30	15	43	13	169	21	28	2	4	25	18	12	144
	8	94	14	51	43	1849	13	72.5	21.5	462.25	21	70.5	23.5	552.25
	19	30	6	101.5	71.5	5112.25	20	36	6	36	13	108	78	6084
	15	50	5	114.5	64.5	4160.25	10	100	50	2500	22	61.5	11.5	132.25
	18	37	20	23.5	13.5	182.25	14	60.5	23.5	552.25	23	47	10	100
	14	57	11	69.5	12.5	156.25	16	48	9	81	25	18	39	1521
	22	16.5	25	13	3.5	12.25	22	22.5	6	36	23	47	30.5	930.25
	14	57	13	58	1	1	14	60.5	3.5	12.25	24	31	26	676
	20	25	19	25.5	.5	.25	14	60.5	35.5	1260.25	24	31	6	36
PENCIL T DRAWINGS	12	72	8	80	8	64	9	109	37	1369	18	85	13	169

PENCIL DRAWINGS (CONTD).	MR. BURNS MARK	POS	MR. LOUGHTON MARK	POS	d	d²	MR. FALLOWS MARK	POS	d	d²	MR. HERON MARK	POS	d	d²
NICHOLSON W.	13	64	11	69.5	5.5	30.25	14	60.5	3.5	12.25	24	31	33	1089.
	8	94	11	69.5	24.5	600.25	13	72.5	21.5	462.25	18	115	21	441.
	5	111	6	101.5	9.5	90.25	13	72.5	38.5	1482.25	14	100.5	10.5	110.25
	14	57	7	85.5	28.5	812.25	7	117	60	3600.	16	93	36	1296.
	11	79.5	6	101.5	22	484.	18	40	39.5	1560.25	13	108	28.5	812.25
	9	90	11	69.5	20.5	420.25	11	90.5	.5	.25	8	124	34	1156.
	21	21	19	25.5	4.5	20.25	14	60.5	39.5	1560.25	22	61.5	40.5	1640.25
	14	57	6	101.5	44.5	1980.25	10	100	43.	1849.	20	77.5	20.5	420.25
	18	37	17	32	5	25.	11	90.5	53.5	2862.25	24	31	1	36.
	4	115	6	101.5	13.5	182.25	11	90.5	24.5	600.25	16	93	22	484.
	29	2	28	6	4	16.	30	1.5	.5	.25	29	5	3	9.
	13	64	15	43	21	441.	18	40	24	576.	20	77.5	13.5	182.25
	10	85.5	15	43	42.5	1806.25	13	72.5	13	169.	21	70.5	15	225.
	11	79.5	7	85.5	6	36.	13	72.5	7	49.	21	70.5	9.5	90.25
REED B	11	79.5	13	58	21.5	460.25	15	53	16	256.	20	77.5	1.5	2.25
	7	100	6	101.5	1.5	2.25	10	100	0	0.	13	108	8	64.
	26	5	25	13	9	81.	29	4	1	1.	29	5	0	0.
	12	72	20	23.5	10.5	110.25	25	13	59	3481.	25	18	54	2916.
	17	43	16	35.5	7.5	56.25	14	60.5	17.5	306.25	22	61.5	18.5	342.25
	30	1	28	6	5	25.	29	4	3	9.	30	1.5	.5	.25
	1	124	6	101.5	22.5	506.25	5	123.5	.5	.25	10	121	3	9.
	6	106	10	75	31	961.	9	109	3	9.	13	108	2	4.
	22	16.5	17	32	15.5	240.25	23	19	2.5	6.25	23	47	24.5	870.25
	3	118	11	69.5	48.5	2352.25	12	82.5	35.5	1260.25	14	100.5	17.5	306.25
	3	118	3	122	4	16.	6	120.5	1.5	2.25	12	115	3	9.
	19	30	15	43	13	169.	20	36	6	36.	22	61.5	31.5	992.25
	6	106	4	118	12	144.	9	109	3	9.	17	88.5	27.5	756.25
	5	111	6	101.5	9.5	90.25	7	17	6	36.	10	121	10	100.
STORY A	6	106	6	101.5	4.5	20.25	8	113.5	7.5	56.25	20	77.5	28.5	812.25
	22	16.5	28	6	10.5	110.25	26	10	6.5	42.	29	5	11.5	132.25
	8	94	4	85.5	8.5	72.25	8	113.5	19.5	380.25	12	115	21	441.
	17	43	11	69.5	26.5	702.25	13	72.5	29.5	870.25	23	47	4	16.
	15	50	13	58	8	64.	25	13	37	1369.	23	47	3	9.
	11	79.5	6	101.5	22	484.	16	48	31.5	992.25	14	100.5	21	441.
	7	100	6	101.5	1.5	2.25	11	90.5	9.5	90.25	25	18	82	6724.
	12	72	12	64	8	64.	13	72.5	.5	.25	7	125	53	2809.
	27	4	28	6	2	4.	30	1.5	2.5	6.25	26	11	7	49.
TAIT H	21	21	16	35.5	14.5	210.25	21	28	7	49.	25	18	3	9.
	18	37	17	32	5	25.	21	28	9	81.	23	47	10	100.
	22	16.5	15	43	26.5	702.25	25	13	3.5	12.25	25	18	1.5	2.25
	10	85.5	6	101.5	16	256.	16	48	37.5	1406.25	15	96.5	9.5	90.25
	8	94	9	77.5	16.5	272.25	13	72.5	21.5	462.25	22	61.5	32.5	1056.25
	2	121	2	124.5	3.5	12.25	5	123.5	2.5	6.25	18	85	36	1296.
	6	106	4	118	12	144.	12	82.5	23.5	552.25	13	108	2	4.
	11	79.5	8	80	.5	.25	15	53	26.5	702.25	24	31	48.5	2352.25
	23	12.5	27	9	3.5	12.25	21	28	15.5	240.25	24	31	18.5	342.25
	24	8.5	22	19	9.5	90.25	28	6	2.5	6.25	25	18	9.5	90.25
	13	64	13	58	6	36.	16	48	16	256.	23	47	17	289.
	25	6	15	43	37	1369.	29	4	2	4.	27	9	3	9.
	24	8.5	12	64	55.5	3080.25	21	28	19.5	380.25	29	3	3.5	12.25
	14	57	11	69.5	12.5	156.25	11	90.5	33.5	1122.25	14	100.5	43.5	1892.25
	20	25	13	58	33	1089.	10	100	7.5	56.25	24	31	6	36.
YARDLEY R.	24	8.5	26	10.5	2	4.	22	22.5	14	196.	25	18	9.5	90.25
Σd²						69,811.25				79,007.5				78,276.

$$P = 1 - \frac{6.69811}{2,097,000}$$
$$= 1 - \frac{418,866}{2,097,000}$$

log 418866 = 5.6221
log 2,097,000 = 6.3216
log quotient = $\overline{1}.3005$

$$P = 1 - .1997$$
$$\rho = .80$$

$$P = 1 - \frac{6.70008}{2,097,000}$$
$$= 1 - \frac{420,048}{2,097,000}$$

log 420048 = 5.6232
log 2,097,000 = 6.3216
log quotient = $\overline{1}.3016$

$$P = 1 - .2003$$
$$\rho = .80$$

$$P = 1 - \frac{6.78,276}{2,097,000}$$
$$= 1 - \frac{469,656}{2,097,000}$$

log 469,656 = 5.6719
log 2,097,000 = 6.3216
log quotient = $\overline{1}.3503$

$$P = 1 - .2241$$
$$\rho = .78$$

$$r = .81 \pm .02 \qquad r = .81 \pm .02 \qquad r = .79 \pm .02$$

RANK DIFFERENCES, AND SQUARES, FOR CORRELATIONS BETWEEN THE GRADINGS OF:-

PENCIL	LOUGHTON AND FALLOWS Σd^2		LOUGHTON AND HERON Σd^2		FALLOWS AND HERON Σd^2	
	d	d^2	d	d^2	d	d^2
ALLAN. A.	62	3844	44	1936	19	361
	19	361	6.5	42.25	11.5	132.25
	17	289	7	49	10	100
	13	169	33.5	1122.25	20.5	420.25
	22	484	5	25	27	756
	39.5	1560.25	18.5	342.25	21	441
	9	81	12	144	3	9
	13	169	34	1156	20.5	420.25
	5	25	.5	.25	5.5	30.25
	18.5	342.25	20.5	420.25	3	9
	18	324	25	625	7	49
	7	49	12	144	5	25
	32.5	1056.25	7.5	56.25	40	1600
	1	1	.5	.25	.5	.25
	5	25	15	225	10	100
CLARK. H.	5	25	7	49	2	4
	30	900	5	25	15	225
	3	9	4	16	11	121
	9	81	28	784	19	361
	3.5	12.25	19	361	15.5	240.25
	29	841	31	961	2	4
	16.5	272.25	18.5	342.25	1	1
	1.5	2.25	6.5	42.25	8	64
	1.5	2.25	1	1	.5	.25
	21.5	462.25	19.5	380.25	2	4
	1	1	3	9	2	4
	2.5	6.25	40	1600	42.5	1806.25
	26.5	702.25	19	361	45.5	2070.25
	2.5	6.25	24.5	600.25	22	484
	3	9	39.5	1560.25	42.5	1806.25
	14.5	210.25	8	64	22.5	506.25
FROST. J.	15.5	240.25	24	576	29.5	870.25
	58.5	3422.25	13.5	182.25	72	5184
	.5	.25	1	1	.5	.25
	1.5	2.25	17	289	18.5	342.25
	7	49	3	9	10	100
	.5	.25	18.5	342.2	19	361
	3.5	12.25	12	144	23	529
	18.5	240.25	17	289	35.5	1260.25
	29	841	21.5	462.25	50.5	2550.25
	41.5	1722.25	28	784	13.5	182.25
	5	25	3	9	8	64
	20	400	44.5	1980.25	24.5	600.25
	54	2916	18.5	342.25	35.5	1260.25
	6	36	14	196	8	64
	15.5	240.25	31	961	46.5	2162.25
	9	81	30.5	930.25	20.5	420.25
	37	1369	26	676	11	121
	35.5	1260.25	26.5	702.25	9	81
	2.5	6.25	12.5	156.25	5	25
	7	49	25	625	18	324
	.5	.25	15	225	14.5	210.25
HYSLOP. D.	3	9	40	1600	37	1369
	10	100	11	121	11	121
	54	2916	2.5	6.25	51.5	2652.25
	7.5	56.25	6.5	42.25	1	1
	14.5	210.25	13.5	182.25	1	1
	1.5	2.25	19.5	380.25	21	441
	15.5	240.25	4	16	9.5	90.25
	18	324	3.5	12.25	21.5	462.25
	4.5	20.25	5.5	30.25	1	1
	8	64	4	16	4	16
	54	2916	33	1089	21	441
	3.5	12.25	34	1156	30.5	930.25
	24.5	600.25	31.5	992.25	7	49
	15	225	25	625	10	100
	21.5	462.25	19.5	380.25	2	4
	65.5	4290.25	6.5	42.25	72	5184
	14.5	210.25	53	2809	38.5	1482.25
	37	1369	23.5	552.25	13.5	182.25
	21.5	462.25	51.5	2652.25	30	900
	4.5	90.25	34	1156	24.5	600.25
	2.5	6.25	27	729	24.5	870.25
	35	1225	5.5	30.25	24.5	870.25
PENCIL. T.	29	841	5	25	24	576

V

PENCIL		L&F		L&H		F&H	
		d	d^2	d	d^2	d	d^2
NICHOLSON. W.		9	81·	38·5	14 82·25	29·5	8 70·25
		3	9·	45·5	20 70·25	42·5	18 06·25
		29	8 41·	1	1·	28	7 84·
		31·5	9 92·25	8·5	72·25	24	5 76·
		61·5	37 82·25	6·5	42·25	68	46 24·
		21	4 41·	54·5	29 70·25	33·5	11 22·25
		35	12 25·	36	12 96·	1	1·
		1·5	2·25	24	5 76·	22·5	5 06·25
		58·5	34 22·25	1	1·	59·5	35 40·25
		11	1 21·	8·5	72·25	2·5	6·25
		4·5	20·25	1	1·	3·5	12·25
		5	9·	34·5	11 80·25	37·5	14 06·25
		29·5	8 70·25	27·5	7 56·25	2	4·
		13	1 69·	1·5	2·25	2	4·
		5	25·	19·5	3 80·25	24·5	6 00·25
		1·5	2·25	6·5	42·25	8	64·
		9	81·	8	64·	1	1·
		10·5	1 10·25	5·5	30·25	5	25·
		25	6 25·	26	6 76·	1	1·
		2	4·	4·5	20·25	3·5	12·25
		22	4 84·	19·5	3 80·25	1·5	2·25
		34	11 56·	33	10 89·	1	1·
		13	1 69·	15	2 25·	28	7 84·
SCOTT. W.		13	1 69·	31	9 61·	18	3 24·
		1·5	2·25	7	49·	5·5	30·25
		7	49·	18·5	3 42·25	25·5	6 50·25
		9	81·	29·5	8 70·25	20·5	4 20·25
		15·5	2 40·25	19·5	3 80·25	4	16·
		12	1 44·	24	5 76·	36	12 96·
		4	16·	1	1·	5	25·
		28	7 84·	29·5	8 70·25	1·5	2·25
		3	9·	22·5	5 06·25	25·5	6 50·25
		45	20 25·	11	1 21·	34	11 56·
		53·5	28 62·25	1	1·	52·5	27 56·25
		11	1 21·	83·5	69 72·25	72·5	52 56·25
		8·5	72·25	61	37 21·	52·5	27 56·25
		4·5	20·25	5	25·	9·5	90·25
TAIT. H.		7·5	56·25	17·5	3 06·25	10	1 00·
		4	16·	15	2 25·	19	3 61·
		30	9 00·	25	6 25·	5	25·
		53·5	28 62·25	5	25·	48·5	23 52·25
		5	25·	16	2 56·	11	1 21·
		1	1·	39·5	15 60·25	38·5	14 82·25
		35·5	12 60·25	10	1 00·	25·5	6 50·25
		27	7 29·	49	24 01·	22	4 84·
		19	3 61·	22	4 84·	3	9·
		13	1 69·	1	1·	12	1 44·
		10	1 00·	11	1 21·	1	1·
		39	15 21·	34	11 56·	5	25·
		36	12 96·	59	34 81·	23	5 29·
		21	4 41·	31	9 61·	10	1 00·
		42	17 64·	27	7 29·	69	47 61·
YARDLEY. R		12	1 44·	7·5	56·25	4·5	20·25
	Σd^2	7 59,83·		7 95 08·5		8 95 59·	

$$p = 1 - \frac{6.75,983·}{2,097,000}$$
$$= 1 - \frac{455,898}{2,097,000}$$
log 455898 = 5·6589
log 2,097,000 = 6·3216
log quotient = $\bar{1}$·3373
$$p = 1 - ·2174$$
$$p = ·78$$
$$r = ·79 \pm ·02$$

$$p = 1 - \frac{6.79,509}{2,097,000}$$
$$= 1 - \frac{477,054}{2,097,000}$$
log 477054 = 5·6785
log 2,097,000 = 6·3216
log quotient = $\bar{1}$·3569
$$p = 1 - ·2275$$
$$p = ·77$$
$$r = ·78 \pm ·02$$

$$p = 1 - \frac{6.89,559}{2,097,000}$$
$$= 1 - \frac{537354}{2,097,000}$$
log 537354 = 5·7303
log 2,097,000 = 6·3216
log quotient = $\bar{1}$·4087
$$p = 1 - ·2563$$
$$p = ·74·$$
$$r = ·76 \pm ·03$$

RANK DIFFERENCES, AND SQUARES, ARE GIVEN WITH REGARD TO THE FIRST LIST (MR BURNS' LIST)

COLOUR DRAWINGS	MR BURNS		MR LOUGHTON				MR FALLOWS				MR HERON			
	MARK	POS	MARK	POS	d	d²	MARK	POS	d	d²	MARK	POS	d	d²
ALLAN. A.	14	40	10	61	21	441	11	61.5	21.5	462.25	19	23	17	289
	9	73	2	115.5	42.5	1806.25	12	53.5	17.5	306.25	12	75	2	4
	6	96.5	3	107.5	11	121	7	103	6.5	42.25	8	106.5	10	100
	8	83	3	107.5	24.5	600.25	9	83.5	.5	.25	14	61	22	484
	6	96.5	2	115.5	19	361	3	119	22.5	506.25	7	111	14.5	210.25
	2	119	2	116.5	3.5	12.25	7	103	16	256	0	107.5	8.5	72.25
	8	83	2	115.5	22.5	1056.25	4	115	32	1024	8	106.5	23.5	552.25
	11	57	8	75.5	18.5	342.25	9	83.5	26.5	702.25	8	106.5	49.5	2450.25
	7	91	7	81.5	9.5	90.25	13	51.5	39.5	1560.25	12	75	16	256
	8	83	11	54	29	841	7	103	20	400	13	67.5	15.5	240.25
	5	101.5	10	61	40.5	1640.25	6	109.5	8	64	8	106.5	5	25
	22	13.5	26	4.5	6	36	21	26	12.5	156.25	14	61	47.5	2256.25
	1	125	5	95	30	900	7	103	22	484	6	115	10	100
	3	110.5	1	123.5	13	169	7	103	7.5	56.25	5	120	9.5	90.25
	3	110.5	1	123.5	18	169	1	125.5	15	225	8	106.5	4	16
CLARK. H.	15	34.5	22	16.5	18	324	26	12.5	22	484	12	75	40.5	1640.25
	13	45	20	23	22	484	17	32	13	169	20	16	29	841
	23	12	15	33.5	21.5	462.25	10	71	59	3481	15	51.5	39.5	1560.25
	25	9.5	19	25.5	16	256	22	24	14.5	210.25	16	43.5	34	1156
	2	119	1	123.5	4.5	20.25	5	112.5	6.5	42.25	6	115	4	16
	7	91	13	43	48	2304	13	51.5	39.5	1560.25	9	97.5	6.5	42.25
	20	18	8	75.5	57.5	3306.25	19	28	10	100	19	23	5	25
	13	45	4	101	56	3136	14	48	5	9	12	75	30	900
	11	57	12	48.5	8.5	72.25	15	43.5	13.5	182.25	14	61	4	16
	5	101.5	10	61	40.5	1640.25	3	119	17.5	306.25	8	106.5	5	25
	2	119	8	75.5	43.5	1892.25	8	94.5	24.5	600.25	9	97.5	21.5	462.25
	14	40	11	54	14	196	15	43.5	3.5	12.25	19	23	17	289
	6	96.5	9	68	28.5	812.25	6	109.5	13	169	5	120	23.5	552.25
	13	45	5	95	50	2500	13	51.5	6.5	42.25	17	35.5	9.5	90.25	35.5
	12	50.5	5	95	44.5	1980.25	9	83.5	33	1089	9	97.5	47	2209
	8	83	4	101	18	324	7	103	20	400	7	111	28	784
	10	64.5	7	81.5	17	289	10	71	6.5	42.25	12	75	10.5	110.25
	14	40	13	43	3	9	13	51.5	11.5	132.25	15	51.5	11.5	132.25
	2	119	3	107.5	11.5	132.25	6	109.5	9.5	90.25	2	124.5	5.5	30.25
	8	83	6	87.5	4.5	20.25	8	94.5	11.5	132.25	11	85.5	2.5	6.25
GRAY. D.	15	34.5	20	23	11.5	132.25	19	28	6.5	42.25	22	12	22.5	506.25
	14	40	22	16.5	23.5	552.25	25	17.5	22.5	506.25	20	16	24	576
	18	22.5	27	6	16.5	272.25	29	3.5	19	361	24	7.5	15	225
	22	13.5	22	16.5	3	9	26	12.5	1	1	22	12	1.5	2.25
	3	110.5	4	101	9.5	90.25	6	109.5	1	1	7	111	.5	.25
	11	57	25	9	48	2304	10	71	14	196	14	61	4	16
	12	50.5	11	54	3.5	12.25	17	32	18.5	342.25	25	16	45.5	2070.25
	17	25.5	24	9.5	23	529	24	20.5	5	25	20	16	9.5	90.25
	8	83	5	95	12	144	9	83.5	.5	.25	17	35.5	47.5	2256.25
	8	83	14	37	46	2116	9	83.5	.5	.25	15	51.5	31.5	992.25
	5	101.5	10	61	40.5	1640.25	3	119	17.5	306.25	9	97.5	4	16
	19	20	9	68	48	2304	15	43.5	23.5	552.25	19	23	3	9
	20	18	5	95	77	5929	11	61.5	43.5	1892.25	19	23	5	25
	15	34.5	13	28	6.5	42.25	16	37	2.5	6.25	15	51.5	17	289
	9	73	4	101	28	784	8	94.5	21.5	462.25	12	75	2	4
	26	8	20	23	15	225	27	3	0	0	24	7.5	.5	.25
	10	64.5	18	28	36.5	1332.25	18	30	34.5	1190.25	17	35.5	29	841
HYSLOP. D.	27	6.5	21	20	13.5	182.25	28	5.5	1	1	20	16	9.5	90.25
	24	11	11	54	43	1849	17	17.5	6.5	42.25	19	23	12	144
	20	18	12	48.5	30.5	930.25	16	37	19	361	16	43.5	25.5	650.25
	1	125	3	107.5	17.5	306.25	1	125.5	.5	.25	1	126	1	1
	17	25.5	6	87.5	62	3844	10	71	45.5	2070.25	18	29	3.5	12.25
	9	73	10	61	12	144	9	83.5	10.5	110.25	9	97.5	24.5	600.25
	3	110.5	2	115.5	5	25	4	115	4.5	20.25	11	85.5	25	625
	3	110.5	3	107.5	3	9	1	125.5	15	225	2	124.5	14	196
	6	96.5	3	107.5	11	121	8	94.5	2	4	12	75	21.5	462.25
	13	45	28	4.5	40.5	1640.25	16	37	8	64	18	29	16	256
	21	15.5	13	43	27.5	702.25	25	17.5	2	4	14	23	7.5	56.25
	7	91	7	81.5	9.5	90.25	10	71	20	400	14	61	30	900
	1	125	1	123.5	1.5	2.25	1	125.5	.5	.25	5	120	5	25
	28	4.5	4	68	63.5	4032.25	24	20.5	16	256	19	23	18.5	342.25
	3	110.5	2	115.5	5	25	7	103	7.5	56.25	6	115	4.5	20.25
	29	2.5	17	30.5	28	784	26	12.5	10	100	23	9.5	7	49
	10	64.5	2	115.5	57	2601	11	61.5	3	9	18	29	35.5	1260.25
	10	64.5	16	32	32.5	1056.25	10	71	6.5	42.25	10	91.5	37	789
	8	83	14	37	46	2116	9	83.5	.5	.25	11	85.5	2.5	6.25
	16	29	13	43	14	196	26	12.5	16.5	272.25	15	51.5	22.5	506.25
	7	91	8	75.5	15.5	240.25	11	61.5	29.5	870.25	9	97.5	6.5	42.25
	3	110.5	2	115.5	5	25	2	122.5	12	144	6	115	4.5	20.25
NEIL. T.	9	73	6	87.5	14.5	210.25	4	115	42	1764	11	85.5	12.5	156.25

COLOUR DRAWINGS	MR. BURNS		MR. LOUGHTON				MR. FALLOWS				MR. HERON			
	MARK	POS	MARK	POS	d	d²	MARK	POS	d	d²	MARK	POS	d	d²
NICHOLSON H	11	57	14	37	20	400·	11	64.5	4.5	20.25	11	85.5	28.5	812.25
	18	22.5	24	11	11.5	132.25	23	22	.5	.25	15	51.5	29.0	841·
	4	104.5	6	87.5	17	289·	10	71	33.5	11 22.25	12	76	29.5	870.25
	12	50.5	6	87.5	37	1369·	12	55.5	5	25·	17	35.5	15.0	225·
	27	6.5	13	43	36.5	13 32.25	10	71	64.5	41 60.25	16	43.5	37	1369·
	10	64.5	10	61	3.5	12.25	14	48	16.5	272.25	17	35.5	29	841·
	15	34.5	6	87.5	53	2809·	11	61.5	27	729·	12	76	40.5	16 40.25
	16	29	14	37	8	64·	12	55.5	26.5	702.25	17	35.5	6.5	42.25
	9	73	9	68	5	25·	15	43.5	29.5	·25	22	12	61	3721·
	11	57	15	33.5	23.5	552.25	12	55.5	1.5	2.25	13	67.5	10.5	110·
	29	2.5	13	43	40.5	16 40.25	30	1.5	1	1·	29	2	·5	·25
	2	119	8	75.5	43.5	18 92.25	10	71	48	2304·	10	91.5	27.5	756.25
	9	73	5	95	22	484·	11	61.5	11.5	132.25	9	97.5	24.5	600.25
	1	125	8	75.5	49.5	24 50.25	9	83.5	41.5	17 22.25	9	97.5	27.5	756.25
	11	57	26	7.5	49.5	24 50.25	16	37	20	400·	14	61	4	16·
	8	83	12	43.5	24.5	11 90.25	9	83.5	.5	·25	13	67.5	15.5	240.25
	28	4.5	30	1	3.5	12.25	29	3.5	1	1·	25	5	·5	·25
	4	104.5	1	123.5	19	361·	3	119	14.5	210.25	3	123	18.5	342.25
	1	125	3	107.5	17.5	306.25	3	119	6.5	42.25	6	115	10·	100·
	21	15.5	23	13.5	2	4·	19	28	12.5	156.25	14	61	45.5	20 70.25
	3	110.5	7	81.5	29	841·	9	83.5	27	729·	11	85.5	25	625·
	15	34.5	8	75.5	41	16 81·	16	37	2.5	6.25	26	3	31.5	992.25
	10	64.5	19	25.5	39	15 21·	22	24	40.5	16 40.25	11	85.5	21	441·
SCOTT H	9	73	21	20	53	28 09·	26	12.5	60.5	36 60.25	14	61	12	144·
	6	96.5	6	87.5	9	81·	7	103	6.5	42.25	11	85.5	11	121·
	8	83	11	54	29	841·	8	94.5	11.5	132.25	15	51.5	31.5	992.25
	9	73	3	107.5	34.5	11 90.25	9	83.5	10.5	110.25	9	97.5	24.5	600.25
	3	110.5	1	123.5	13	169·	2	122.5	12	144·	8	106.5	4	16·
	15	34.5	5	95	60.5	36 60.25	14	48	13.5	182.25	15	51.5	17	289·
	18	22.5	24	11	11.5	132.25	27	8	14.5	210.25	25	5	17.5	3 06.25
	11	57	21	20	37	13 69·	15	43.5	15.5	182.25	23	9.5	47.5	22 56.25
	2	119	18	28	91	82 81·	9	83.5	35.5	12 60.25	17	35.5	83.5	69 72.25
	12	50.5	14	37	13.5	182.25	16	37	13.5	182.25	16	43.5	7	49·
	5	101.5	11	54	47.5	22 56.25	9	83.5	18	324·	11	85.5	16	256·
	0	128	0	128	0	0·	0	128	0	0·	0	127.5	·5	·25
	8	83	1	123.5	40.5	16 40.25	7	103	20	400·	5	120	37	13 69·
	30	1	29	2.5	1.5	2.25	30	1.5	·5	·25	30	1	0	0·
TAIT H	12	50.5	9	68	17.5	306.25	11	61.5	11	121·	13	67.5	17	289·
	14	40	10	61	21	441·	26	12.5	27.5	756.25	20	16	24	576·
	13	45	11	54	9	81·	15	43.5	1.5	2.25	16	43.5	1.5	2.25
	9	73	12	48.5	24.5	600.25	16	37	36	1296·	15	51.5	21.5	462.25
	7	91	9	68	23	529·	17	32	59	3481·	15	51.5	39.5	15 60.25
	10	64.5	1	123.5	59	34 81·	8	94.5	30	900·	12	76	10.5	110.25
	3	110.5	8	75.5	35	1225·	8	94.5	16	256·	12	76	35.5	12 60.25
	16	29	24	11	18	324·	10	71	42	1764·	19	23	6	36·
	16	29	28	4.5	24.5	600.25	25	17.5	11.5	132.25	17	35.5	6.5	42.25
	18	22.5	17	30.5	8	64·	27	8	14.5	210.25	17	35.5	13	169·
	12	50.5	6	87.5	37	13 69·	9	83.5	33	10 89·	11	85.5	35	12 25·
	25	9.5	22	16.5	7	49·	22	24	14.5	210.25	16	43.5	34	11 56·
	10	64.5	9	68	3.5	12.25	8	94.5	30	900·	9	97.5	33	10 89·
	2	119	13	43	76	57 76·	10	71	48	2304·	14	61	58	33 64·
	16	29	23	13.5	15.5	240.25	28	5.5	23.5	552.25	17	35.5	6.5	42.25
YARDLEY R.	6	96.5	4	101·	4.5	20.25	5	112.5	16	256·	5	120	23.5	552.25
Σd²						127,847·				64,518.75				76,9??.5

$$p = 1 - \frac{6.127,847}{2,097,000}$$
$$= 1 - \frac{767082}{2097000}$$
log 767082 = 5.8849
log 2097000 = 6.3216
log quotient = $\bar{1}.5633$
$$p = 1 - .3659$$
$$p = .63$$
$$r = .65 \pm .03$$

$$p = 1 - \frac{6.64518.75}{2,097,000}$$
$$= 1 - \frac{387113}{2,097,000}$$
log 387113 = 5.5878
log 2,097,000 = 6.3216
log quotient = $\bar{1}.2662$
$$p = 1 - .1846$$
$$p = .82$$
$$r = .83 \pm .02$$

$$p = 1 - \frac{6.76925.5}{2,097,000}$$
$$= 1 - \frac{461552}{2,097,000}$$
log 461552 = 5.6643
log 2,097,000 = 6.3216
log quotient = $\bar{1}.3427$
$$p = 1 - .2202$$
$$p = .78$$
$$r = .79 \pm .02$$

RANK DIFFERENCES, AND SQUARES, FOR THE CORRELATIONS BETWEEN THE GRADINGS OF:—

COLOUR	LOUGHTON AND FALLOWS (L&F)		LOUGHTON AND HERON (L&H)		FALLOWS AND HERON (F&H)	
	d	d²	d	d²	d	d²
ALLAN. A.	·5	·25	38	14 44	38·5	14 82·25
	60	3600·	40·5	16 40·25	19·5	380·25
	4·5	20·25	1	1·	3·5	12·25
	24	576·	46·5	21 62·25	22·5	5 06·25
	3·5	12·25	4·5	20·25	8	64·
	12·5	156·25	12	144·	24·5	600·25
	·5	·25	9	81·	8·5	72·25
	8	64·	31	961·	23	529·
	30	900·	6·5	42·25	23·5	552·25
	49	24 01·	13·5	182·25	35·5	12 60·25
	48·5	23 52·25	45·5	20 70·25	3	9·
	18·5	3 42·25	53·5	28 62·25	35	12 25·
	8	64·	20	400·	12	144·
	20·5	4 20·25	3·5	12·25	17	289·
	2	4·	17	289·	19	361·
	4	16·	58·5	34 22·25	62·5	39 06·25
	9	81·	7	49·	16	256·
	37·5	14 06·25	18	3 24·	19·5	380·25
	1·5	2·25	18	324·	19·5	380·25
	11	121·	8·5	72·25	2·5	6·25
	8·5	72·25	54·5	29 70·25	46	21 16·
	47·5	22 56·25	52·5	27 56·25	5	25·
	53	28 09·	26	676·	27	729·
	5	25·	12·5	1 56·25	17·5	·306·25
	58	33 64·	45·5	20 70·25	12·5	156·25
	19	361·	22	484·	3	9·
	10·5	110·25	31	961·	20·5	420·25
FISHER. A.	41·5	17 22·25	52	27 04·	10·5	110·25
	13·5	18 92·25	59·5	35 40·25	16	2 56·
	11·5	132·25	2·5	6·25	14	196·
	2	4·	10	100·	8	64·
	10·5	110·25	6·5	42·25	4	16·
	8·5	72·25	8·6	72·25	0	0·
	2	4·	17	289·	15	2 25·
	7	49·	2	4·	9	81·
	5	25·	11	1 21·	16	256·
	1	1·	·5	·25	1·5	2·25
	2·5	6·25	1·5	2·25	4	16·
	4	16·	3·5	12·25	·5	·25
	8·5	72·25	10	100·	1·5	2·25
	62	38 44·	52	27 04·	10	100·
	22	484·	49	24 01·	27	729·
	18	324·	13·5	182·25	4·5	20·25
	11·5	132·25	59·5	35 40·25	48	2304·
	46·5	21 62·25	14·5	210·25	32	10 24·
	58	33 64·	36	12 96·	22	4 84·
	24·5	6 00·25	45	20 25·	20·5	4 20·25
	33·5	11 22·25	72	51 84·	38·5	14 82·25
	9	81·	23·5	5 52·25	14·5	210·25
	6·5	42·25	26	676·	19·5	380·25
	15	2 25·	15·5	2 40·25	·5	·25
	2	4·	7·5	56·25	5·5	30·25
	14·5	210·25	4	16·	10·5	110·25
INNES. R.	36·5	13 32·25	31	9 61·	5·5	30·25
	11·5	132·25	5	25·	6·5	42·25
	18	324·	18·5	3 42·25	·5	·25
	16·5	2 72·25	58·5	34 22·25	42	17 64·
	22·5	5 06·25	36·5	13 32·25	14	196·
	·5	·25	30	9 00·	30	9 00·
	18	324·	17	289·	1	1·
	13	169·	32·5	10 56·25	19·5	380·25
	32·5	10 56·25	24·5	600·25	8	64·
	25·5	6 50·25	20	400·	5·5	30·25
	10·5	110·25	20·5	4 20·25	10	100·
	2	4·	3·5	12·25	5·5	30·25
	47·5	22 56·25	45	20 25·	2·5	6·25
	12·5	1 56·25	·5	·25	12	144·
	18	324·	21	4 41·	3	9·
	54	29 16·	86·5	75 82·25	32·5	10 56·25
	39	15 21·	59·5	35 40·25	20·5	4 20·25
	46·5	21 62·25	48·5	23 52·25	2	4·
	30·5	9 30·25	8·5	72·25	39	15 21·
	14	196·	22	4 84·	36	12 96·
	7	49·	·5	·25	7·5	56·25
NEIL. T.	27·5	756·25	2	4·	29·5	8 70·25

COLOUR		$L_{9/F}$		$L_{?/H}$		$F_{?/H}$	
		d	d²	d	d²	d	d²
NICHOLSON W		24.5	600.25	48.5	2352.25	24	576.
		11	121.	40.5	1640.25	29.5	870.25
		16.5	272.25	12.5	156.25	4	16.
		32	1024.	52	2704.	20	400.
		28	784.	.5	.25	27.5	756.25
		13	169.	25.5	650.25	12.5	156.25
		26	676.	12.5	156.25	13.5	182.25
		18.5	342.25	1.5	2.25	20	400.
		24.5	600.25	56	3136.	31.5	992.25
		22	484.	34	1156.	12	144.
		41.5	1722.25	41	1681.	.5	.25
		4.5	20.25	16	256.	20.5	420.25
		33.5	1122.25	2.5	6.25	36	1296.
		8	64.	22	484.	14	196.
		29.5	870.25	53.5	2862.25	24	576.
		35	1225.	19	361.	16	256.
		2.5	6.25	4	16.	1.5	2.25
		4.5	20.25	.5	.25	4	16.
ROBSON J		11.5	132.25	7.5	56.25	4	16.
		14.5	210.25	47.5	2256.25	33	1089.
		2	4.	4	16.	2	4.
		38.5	1482.25	72.5	5256.25	34	1156.
		1.5	2.25	60	3600.	61.5	3782.25
		7.5	56.25	41	1681.	48.5	2352.25
		15.5	240.25	2	4.	17.5	306.25
		40.5	1640.25	2.5	6.25	43	1849.
		24	576.	10	100.	6	36.
		1	1.	17	289.	16	256.
		47	2209.	43.5	1892.25	3.5	12.25
		3	9.	6	36.	3	9.
		23.5	552.25	10.5	110.25	34	1156.
		55.5	3080.25	7.5	56.25	48	2304.
		0	0.	6.5	42.25	6.5	42.25
STEPHENSON A		29.5	870.25	31.5	992.25	2	4.
		0	0.	.5	.25	.5	.25
		20.5	420.25	3.5	12.25	17	289.
		1	1.	1.5	2.25	.5	.25
		6.5	42.25	.5	.25	6	36.
		48.5	2352.25	45	2025.25.	3.5	12.25
		10.5	110.25	10.5	110.25	0	0.
		11.5	132.25	3	9.	14.5	.25
		36	1296.	16.5	272.25	19.5	380.25
		29	841.	48.5	2352.25	19.5	380.25
		19	361.	.5	.25	19.5	380.25
		60	3600.	12	144.	48	2304.
		13	169.	31	961.	18	324.
		22.5	506.25	5	25.	27.5	756.25
		4	16.	2	4.	2	4.
		7.5	56.25	27	729.	19.5	380.25
		26.5	702.25	29.5	870.26	3	9.
		28	784.	18	324.	10	100.
		8	64.	22	484.	30	900.
YARDLEY R.		10.5	110.25	19	361.	7.5	56.25
	Σd²	87,141.		121,618.		61,772.25	

$$\rho = 1 - \frac{6 . 87,141.}{2,097,000} \qquad \rho = 1 - \frac{6 . 121,618.}{2,097,000} \qquad \rho = 1 - \frac{6 . 61,772.25}{2,097,000}$$

$$= 1 - \frac{522846}{2,097,000} \qquad = 1 - \frac{729708}{2,097,000} \qquad = 1 - \frac{370634}{2,097,000}$$

log 522800 = 5.7184   log 729700 = 5.8631   log 370600 = 5.5689

log 2,097,000 = 6.3216   log 2,097,000 = 6.3216   log 2,097,000 = 6.3216

log quotient = $\overline{1}$.3768   log quotient = $\overline{1}$.5415   log quotient = $\overline{1}$.2473

$$\rho = 1 - .2494 \qquad \rho = 1 - .3479 \qquad \rho = 1 - .1767$$

$$\rho = .75 \qquad\qquad \rho = .65 \qquad\qquad \rho = .82$$

$$r = .77 \pm .02 \qquad r = .67 \pm .03 \qquad r = .83 \pm .02$$

RANK DIFFERENCES, AND SQUARES, ARE GIVEN WITH REGARD TO THE FIRST LIST.

MEMORY DRAWINGS	MR. BURNS Mark	Pos	MR. LOUGHTON Mark	Pos	d	d²	MR. FALLONS Mark	Pos	d	d²	MR. HERON Mark	Pos	d	d²
ALLAN A	18	60	27	10	50	2500	25	26.5	33.5	1122.25	21	39	21	441
	9	91.5	16	53.5	38	1444	9	109	17.5	306.25	13	93	1.5	2.25
	3	117	5	118.5	1.5	2.25	3	124.5	7.5	64	6	125	8	64
	13	60	11	90	30	900	10	105.5	45.5	2070.25	21	39	21	441
	11	78	8	107	29	841	11	102	24	576	21	39	39	1521
	4	112	9	103	9	81	11	102	10	100	7	123	11	121
	16	37	14	68.5	31.5	992.5	21	48.5	11.5	132.25	20	48	11	121
	4	112	23	28	84	7056	14	86.5	25.5	650.25	19	59	53	2809
	6	106	8	107	1	1	12	97	9	81	21	39	67	4489
	16	37	13	76.5	39.5	1560.25	22	44.5	7.5	56.25	21	39	2	4
	7	101.5	7	111.5	10	100	7	116.5	15	225	14	87	14.5	210.25
	23	14.5	15	61	46.5	2162.25	18	59.5	45	2025	14	87	72.5	5256.25
	4	112	3	124.5	12.5	156.25	9	109	3	9	6	125	13	169
	2	122.5	5	118.5	4	16	2	126.5	4	16	5	127	4.5	20.25
	15	44.5	3	124.5	80	6400	13	59.5	15	225	13	93	48.5	2352.25
CLARK H	14	25.5	27	10	15.5	240.25	26	18	7.5	56.25	15	83	57.5	3306.25
	18	28	21	34	6	36	25	26.5	1.5	2.25	19	59	31	961
	25	10.5	25	29.5	12	144	26	18	7.5	56.25	23	17	6.5	42.25
	13	60	18	44	16	256	14	86.5	26.5	702.25	20	48	12	144
	12	69	13	76.5	7.5	56.25	14	53	16	256	16	76	7	49
	10	85.5	16	53.5	32	1024	14	86.5	1	1	12	100	14.5	210.25
	12	69	14	68.5	.5	.25	18	59.5	9.5	90.25	16	76	7	49
	20	22.5	28	5.5	17	289	25	26.5	4	16	23	17	5.5	30.25
	9	91.5	2	126	34.5	1190.25	16	70.5	21	441	8	121.5	20	900
	8	96.5	16	53.5	43	1849	7	116.5	20	400	19	59	37.5	1406.25
	2	122.5	5	118.5	4	16	5	120.5	2	4	10	113.5	9	81
	14	52	15	61	9	81	16	70.5	18.5	342.25	11	107.5	55.5	3080.25
	11	78	18	44	34	1156	20	50.5	27.5	756.25	22	27.5	50.5	2550.25
	7	101.5	4	122.5	21	441	2	126.5	25.5	650.25	8	121.5	20	400
	14	52	15	61	9	81	16	70.5	18.5	342.25	16	76	24	576
	9	91.5	12	82.5	9	81	8	113	21.5	462.25	10	113.5	22	484
	4	112	11	90	22	484	8	113	1	1	12	100	12	144
	14	52	26	17	35	1225	24	33.5	18.5	342.25	22	27.5	24.5	600.25
	2	122.5	12	82.5	40	1600	6	119	3.5	12.25	9	118	4.5	20.25
	14	52	14	68.5	16.5	272.25	30	1	51	2601	26	3	49	2401
GRAY D	26	8.5	28	5.5	3	9	25	26.5	18	324	16	76	67.5	4556.25
	11	78	14	68.5	9.5	90.25	15	78.5	.5	.25	24	9.5	68.5	4692.25
	24	12.5	12	82.5	70	4900	26	18	5.5	30.25	24	9.5	3	9
	9	91.5	14	68.5	23	529	25	26.5	65	4225	23	17	7.5	5550.25
	11	78	16	53.5	24.5	600.25	13	92.5	14.5	210.25	19	59	19	361
	14	52	22	31	21	441	26	18	34	1156	28	2	50	2500
	22	16.5	25	22.5	6	36	29	2.5	14	196	25	5	11.5	132.25
	17	31.5	16	53.5	22	484	24	33.5	2	4	22	27.5	4	16
	12	69	13	76.5	7.5	56.25	16	70.5	1.5	2.25	11	107.5	38.5	1482.25
	21	19	19	40	81	441	22	44.5	25.5	650.25	22	27.5	8.5	72.25
	3	117	7	111.5	5.5	30.25	13	92.5	24.5	600.25	19	59	58	3364
	3	117	6	114	3	9	4	122.5	5.5	30.25	10	113.5	3.5	12.25
	5	108.5	8	107	1.5	2.25	9	109	.5	.25	22	27.5	81	6561
	9	91.5	13	76.5	15	225	12	97	5.5	30.25	16	76	15.5	240.25
	1	126.5	10	98.5	28	784	7	116.5	10	100	11	107.5	19	361
	12	69	14	68.5	.5	.25	18	59.5	9.5	90.25	22	27.5	41.5	1722.25
	27	6	18	44	38	1444	25	26.5	20.5	420.25	30	1	5	25
	10	85.5	7	111.5	26	676	14	86.5	1	1	19	59	26.5	702.25
INNES . R .	15	44.5	11	90	45.5	2070.25	23	39	5.5	30.25	23	17	27.5	756.25
	17	31.5	24	25	6.5	42.25	28	4	27.5	756.25	13	93	61.5	3782.25
	0	128	1	127	1	1	4	122.5	5.5	30.25	6	125	3	9
	15	44.5	20	37	7.5	56.25	23	39	5.5	30.25	21	39	5.5	30.25
	6	106	5	118.5	12.5	156.25	8	113	7	49	9	118	12	144
	15	44.5	14	68.5	24	576	23	39	5.5	30.25	19	59	15.5	240.25
	11	78	10	98.5	20.5	420.25	15	78.5	.5	.25	20	48	30	900
	12	69	9	103	34	1156	14	86.5	17.5	306.25	20	48	21	441
	18	28	16	53.5	25.5	650.25	16	70.5	12.5	1806.25	24	9.5	19.5	380.25
	15	44.5	11	90	45.5	2070.25	19	53	8.5	72.25	21	39	5.5	30.25
	18	28	14	68.5	39.5	1560.25	18	59.5	31.5	992.25	22	27.5	.5	.25
	11	78	8	107	29	841	10	105.5	27.5	756.25	11	107.5	29.5	870.25
	22	16.5	11	90	73.5	5402.25	23	39	22.5	506.25	20	48	31.5	992.25
	7	101.5	11	90	11.5	132.25	18	59.5	42	1764	16	76	25.5	650.25
	21	19	29	2.5	16.5	272.25	26	18	1	1	17	69	50	2500
	20	22.5	26	17	5.5	30.25	22	44.5	22	484	23	17	5.5	301.25
	16	37	24	25	12	144	24	33.5	3.5	12.25	16	76.5	39	1521.25
	13	60	24	25	35	1225	16	70.5	10.5	110.25	23	17	43	1849
	27	6	27	10	4	16	27	9	3	9	22	27.5	21.5	462.25
	5	108.5	26	114.5	6	36	15	78.5	30	900	11	107.5	1	1
	8	96.5	10	98.5	2	4	13	92.5	4.5	16	21	39	57.5	3306.25
NEIL . T.	16	37	10	98.5	61.5	3782.25	11	102	65	4225	19.5	59	22	484

MEMORY DRAWINGS (CONT'D)	MR. BURNS		MR. LOUGHTON				MR. FALLOWS				MR. HERON		
	MARK	POS	MARK	POS	d	d²	MARK	POS	d	d²	MARK	POS	d	d²
NICHOLSON W	10	85.5	13	76.5	9	81	16	76.5	15	225	16	76	9.5	90.25
	6	106	26	17	89	79 21	22	44.5	61.5	37 82.25	13	93	13	169
	20	22.5	15	61	38.5	14 82.25	27	9	13.5	182.25	14	87	65.5	42 90.25
	21	19	22	31	12	144	25	26.5	7.5	56.25	21	39	20	400
	13	60	20	37	23	529	27	9	51	2601	25	5	55	30 25
	7	101.5	23	28	73.5	50 42.25	14	86.5	15	225	19	59	42.5	18 06.25
	13	60	26	17	43	18 49	21	48.5	11.5	132.25	13	93	33	10 89
	13	60	13	76.5	16.5	272.25	22	44.5	15.5	240.25	12	100	40	16 00
	17	31.5	26	17	14.5	210.25	25	26.5	5	25	12	100	68.5	46 92.25
	12	69	17	48	21	441	23	39	30	900	12	100	31	961
	16	37	11	90	53	2809	9	109	72	51 84	19	59	22	484
	13	60	11	90	30	900	18	59.5	.5	.25	11	107.5	47.5	22 56.25
	4	118	17	48	64	40 96	15	78.5	33.5	11 22.25	11	107.5	4.5	9 20.25
	12	69	18	44	25	6 25	9	109	40	16 00	12	100	31	961
	17	31.5	16	53.5	22	484	24	33.5	2	4	21	39	7.5	56.25
	7	101.5	12	82.5	19	361	18	59.5	42	17 64	19	59	42.5	18 06.25
	24	12.5	28	5.5	7	49	26	18	5.5	30.25	22	87.5	15	225
	25	10.5	28	5.5	5	25	27	9	1.5	2.25	23	17	6.5	42.25
	11	78	11	90	12	144	15	78.5	.5	.25	19	59	19	361
	29	2	30	1	1	1	26	18	16	256	23	17	15	225
	9	91.5	13	76.5	15	225	11	102	10.5	110.25	11	104.5	16	256
	8	96.5	13	76.5	20	400	14	86.5	10	100	16	46	20.5	420.25
	15	44.5	20	37	7.5	56.25	15	78.5	34	11 56	16	46	32	10 24
SCOTT W	2	122.5	21	34	88.5	34 22.25	11	102	20.5	420.25	20	48	74.5	55 50.25
	3	117	9	103	14	196	12	97	20	400	9	118	1	1
	10	85.5	11	90	4.5	20.25	12	97	11.5	132.25	16	46	9.5	90.25
	2	122.5	4	122.5	0	0	15	78.5	44	1936	19	59	63.5	40 32.25
	14	52	7	111.5	59.5	35 40.25	14	86.5	34.5	11 90.25	14	87	35	12 25
	10	85.5	10	98.5	13	169	13	92.5	7	49	12	100	14.5	210.25
	16	37	15	61	24	8 76	20	50.5	13.5	182.25	25	5	32	10 24
	1	126.5	15	61	65.5	42 90.25	3	124.5	2	4	9	118	8.5	72.25
	3	117	8	104	10	100	15	78.5	38.5	14 82.25	9	118	1	1
	28	3.5	26	14	13.5	182.25	26	18	14.5	210.25	22	87.5	24	576
	7	101.5	26	14	84.5	71 40.25	17	65.5	36	12 96	20	48	53.5	28 62.25
	8	96.5	5	118.5	22	484	5	120.5	24	576	20	48	48.5	23 52.25
	10	85.5	27	10	75.5	57 00.25	18	59.5	26	676	21	39	46.5	21 62.25
	30	1	17	48	47	22 09	26	18	17	289	24	9.5	8.5	72.25
TAIT H	23	14.5	21	34	19.5	3 80.25	29	2.5	12	144	14	84	72.5	52 76.25
	14	52	11	90	38	1482	18	59.5	4.5	56.25	13	93	41	1681
	16	37	19	40	3	9	27	9	28	784	19	59	22	484
	11	78	10	98.5	20.5	420.25	17	65.5	12.5	156.25	19	59	19	361
	12	69	18	44	25	6 25	24	33.5	35.5	12 60.25	24	9.5	59.5	35 40.25
	2	122.5	0	128	5.5	30.25	1	128	5.5	30.25	4	128	5.5	30.25
	11	78	5	118.5	40.5	16 40.25	7	116.5	38.5	14 82.25	10	113.5	35.5	12 60.25
	15	44.5	26	14	27.5	7 56.25	19	53	8.5	72.25	17	69	24.5	6 00.25
	20	22.5	29	8.5	20	400	27	9	13.5	182.25	22	87.5	5	25
	28	3.5	16	53.5	50	25 0 0	27	9	5.5	30.25	23	14	13.5	182.25
	27	6	27	10	4	16	27	9	3	9	15	83	77	59 29
	13	60	22	31	29	8 41	22	44.5	15.5	240.25	19	59	1	1
	19	25.5	23	28	2.5	6.25	27	9	16.5	272.25	17	69	43.5	18 92.25
	12	69	19	40	29	8 41	12	97	28	784	13	93	24	576
	26	8.5	26	17	8.5	72.25	24	33.5	25	625	24	9.5	1	1
YARDLEY R.	15	44.5	15	61	16.5	272.25	16	76.5	96	676	15	83	38.5	14 82.25
					13 29 1									
Σd²					13 29 65.25				71 490.75				15 69 90	

$$\rho = 1 - \frac{6.132965}{2,097,000} \qquad \rho = 1 - \frac{6.71491}{2,097,000} \qquad \rho = 1 - \frac{6.156990}{2,097,000}$$

$$= 1 - \frac{797,792}{2,097,000} \qquad = 1 - \frac{428,945}{2,097,000} \qquad = 1 - \frac{941940}{2,097,000}$$

log 797800 = 5.9019 log 428900 = 5.6323 log 941900 = 5.9740
log 2,097,000 = 6.3216 log 2,097,000 = 6.3216 log 2,097,000 = 6.3216
log quotient = $\overline{1}$.5803 log quotient = $\overline{1}$.3107 log quotient = $\overline{1}$.6524

$$\rho = 1 - .3805 \qquad \rho = 1 - .2045 \qquad \rho = 1 - .4491$$

$$\rho = .62 \qquad \rho = .80 \qquad \rho = .55$$

$$r = .64 \pm .04 \qquad r = .81 \pm .02 \qquad r = .57 \pm .04$$

RANK DIFFERENCES, AND SQUARES, FOR THE CORRELATIONS BETWEEN
THE GRADINGS OF:-

MEMORY.	LOUGHTON AND FALLOWS		LOUGHTON AND HERON		FALLOWS AND HERON	
	d	d²	d	d²	d	d²
ALLAN. A.	16.5	272.25	29	841	12.5	156.25
	55.5	3080.25	39.5	1560.25	16	256
	6	36	6.5	42.25	.5	.25
	15.5	240.25	51	2601	66.5	4422.25
	5	25	68	4624	63	3969
	1	1	20	400	21	441
	20	400	20.5	420.25	5	.25
	58.5	3422.25	31	961	27.5	756.25
	10	100	68	4624	58	3364
	32	1024	37.5	1466.25	5.5	30.25
	5	25	24.5	600.25	29.5	870.25
	1.5	2.25	26	676	24.5	456.25
	15.5	240.25	.5	.25	16	256
	8	64	8.5	72.25	.5	.25
	65	4225	31.5	992.25	33.5	1122.25
CLARK. H.	8	64	73	5329	65	4225
	7.5	56.25	25	625	32.5	1056.25
	4.5	20.25	5.5	30.25	1	1
	42.5	1806.25	4	16	28.5	812.25
	23.5	552.25	.5	.25	23	529
	33	1089	46.5	2162.25	13.5	182.25
	9	81	7.5	56.25	16.5	272.25
	21	441	11.5	132.25	9.5	90.25
	55.5	3080.25	4.5	20.25	51	2601
	63	3969	5.5	30.25	54.5	3306.25
	2	4	5	25	7	49
	9.5	90.25	46.5	2162.25	37	1369
	6.5	42.25	16.5	272.25	23	529
	4	16	1	1	5	25
	9.5	90.25	15	225	5.5	30.25
	30.5	930.25	31	961	.5	.25
FROST. J.	23	529	10	100	13	169
	16.5	272.25	10.5	110.25	6	36
	36.5	1332.25	35.5	1260.25	1	1
	64.5	4556.25	65.5	4290.25	2	4
	21	441	70.5	4970.25	49.5	2450.25
	10	100	59	3481	69	4761
	64.5	4160.25	73	5329	8.5	72.25
	42	1764	51.5	2652.25	9.5	90.25
	39	1521	5.5	30.25	33.5	1122.25
	13	169	29	841	16	256
	20	400	16.5	272.25	2.5	6.25
	20	400	26	676	6	36
	6	36	31	961	37	1369
	4.5	20.25	12.5	156.25	17	289
	19	361	52.5	2756.25	33.5	1122.25
	8.5	72.25	.5	.25	9	81
	2	4	79.5	6320.25	81.5	6642.25
	20.5	420.25	.5	.25	21	441
	18	324	9	81	9	81
	9	81	41	441	32	1024
	17.5	306.25	43	1849	25.5	650.25
HYSLOP. D.	25	625	52.5	2756.25	27.5	756.25
	51	2601	73	5329	22	484
	21	441	68	4624	89	7921
	4.5	20.25	2	4	2.5	6.25
	2	4	2	4	0	0
	5.5	30.25	.5	.25	5	25
	29.5	870.25	9.5	90.25	20	400
	20	400	50.5	.25	30.5	930.25
	16.5	272.25	5.5	3025	38.5	1482.25
	14	289	44	484	61	3721
	37	1369	51	2601	14	196
	9	81	41	441	32	1024
	1.5	2.25	.5	.25	2	4
	51	2601	42	484	9	81
	30.5	930.25	14	196	16.5	272.25
	15.5	240.25	66.5	4422.25	51	2601
	27.5	756.25	0	0	27.5	756.25
	8.5	72.25	51	2601	42.5	1806.25
	45.5	2070.25	8	64	53.5	2862.25
	1	1	17.5	306.25	18.5	342.25
	36	1296	7	49	29	841
	6	36	59.5	3540.25	53.5	2862.25
NEIL. T.	3.5	12.25	34.5	1560.25	43	1849

MEMORY		CPE		CPH		FEH	
		d	d²	d	d²	d	d²
NICHOLSON H		6	36.	.5	.25	5.5	30.25
		27	729.	76	5776.	48.5	2352.25
		52	2704.	26	676.	78	6084.
		4.5	20.25	8	64.	12.5	156.25
		28	784.	32	1024.	4	16.
		58.5	3422.25	31	961.	27.5	756.25
		31.5	992.25	76	5776.	44.5	1980.25
		32	1024.	23.5	552.25	55.5	3080.25
		9.5	90.25	83	6889.	73.5	5402.25
		9	81.	52	2704.	61	3721.
		19	361.	31	961.	50	2500.
		30.5	930.25	17.5	306.25	48	2304.
		30.5	930.25	59.5	3540.25	29	841.
		6.5	42.25	56	3136.	9	81.
		20	400.	14.5	210.25	6.5	30.25
		23	529.	23.5	552.25	.5	.25
		12.5	156.25	22	484.	9.5	90.25
		3.5	12.25	11.5	132.25	8	64.
		11.5	132.25	31	961.	19.5	380.25
		17	289.	16	256.	1	1.
		25.5	650.25	31	961.	5.5	30.25
		10	100.	.5	.25	10.5	110.25
		41.5	1722.25	39	1521.	2.5	6.25
SCOTT W		68	4624.	4	16.	54	2916.
		6	36.	15	225.	21	441.
		7	49.	14	196.	21	441.
		44	1936.	63.5	4032.25	19.5	380.25
		25	625.	24.5	600.25	.5	.25
		6	36.	1.5	2.25	7.5	56.25
		10.5	110.25	56	3136.	45.5	2040.25
		63.5	4032.25	57	3249.	6.5	42.25
		28.5	812.25	11	121.	39.5	1560.25
		1	1.	10	100.	9.5	90.25
		48.5	2352.25	31	961.	17.5	306.25
		2	4.	70.5	4970.25	72.5	5256.25
		49.5	2450.25	29	841.	24.5	420.25
		30	900.	58.5	1472.25	8.5	72.25
TAIT H		31.5	992.25	53	2809.	84.5	4140.25
		30.5	930.25	3	9.	33.5	1122.25
		31	961.	19	361.	50	2500.
		33	1089.	39.5	1560.25	6.5	42.25
		10.5	110.25	31.5	1190.25	24	576.
		0	0.	0	0.	0	0.
		2	4.	5	25.	3	9.
		36	1296.	52	2704.	16	256.
		6.5	42.25	25	625.	18.5	342.25
		44.5	1980.25	36.5	1332.25	8	64.
		1	1.	73	5329.	74	5476.
		13.5	182.25	28	784.	14.5	210.25
		19	361.	41	1681.	60	3600.
		54	3249.	53	2809.	4	16.
		16.5	272.25	7.5	56.25	24	576.
YARDLEY R.		9.5	90.25	22	484.	12.5	156.25
	Σd^2		107,630.5		187,926.75		149,562.75

$$\rho = 1 - \frac{6.107,630.}{2,097,000}$$
$$= 1 - \frac{645783}{2,097,000}$$

$\log 645783 = 5.8101$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.4885$

$$\rho = 1 - .3080$$
$$\rho = .69$$
$$r = .71 \pm .03$$

$$\rho = 1 - \frac{6.187,927.}{2,097,000}$$
$$= 1 - \frac{1127621}{2,097,000}$$

$\log 1127621 = 6.0523$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.7307$

$$\rho = 1 - .5379$$
$$\rho = .46$$
$$r = .48 \pm .05$$

$$\rho = 1 - \frac{6.149,563.}{2,097,000}$$
$$= 1 - \frac{897,377}{2,097,000}$$

$\log 897377 = 5.9530$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.6314$

$$\rho = 1 - .4280$$
$$\rho = .57$$
$$r = .59 \pm .04$$

MARKS GAINED (AND POSITIONS) IN THE 3 DRAWING TESTS (THE SUM OF THE MARKS AWARDED BY 4 MARKERS)

RANK DIFFERENCES, AND SQUARES, ARE GIVEN FOR THE 3 INTER-CORRELATIONS. **D5**

DRAWING TESTS	PENCIL MARK 120	Pos.	P COLOUR.MEMORY d^2	d	COLOUR MARK 120	Pos	P PENCIL.COLOUR d	d^2	MEMORY MARK 120	Pos	P PENCIL.MEMORY d	d^2			TOTAL MARK IN DRAWING 360	Posn
ALLAN A	79	31.5	756.25	27.6	54	51	19.5	380.25	86	23.5	8	64.	20	180	219	31
	33	113	600.25	24.5	45	65.5	47.5	2256.25	47	99	14	196.	10	86	125	98
	59	63.5	324.	18	24	107	43.5	1892.25	17	105.5	61.5	3782.25	7	61	100	111
	33	113	49.	7	34	97.5	25.5	650.25	55	80.5	32.5	1056.25	9	83	122	102
	28	119	600.25	24.5	18	114.5	4.5	20.25	51	90	29	841.	6	58	97	114.5
	59	63.5	56.25	7.5	11	123.5	60	3600.	31	116	52.5	2756.25	7	62	101	110
	88	19.5	3192.25	56.5	22	108	88.5	7832.25	71	51.5	32	1024.	16	142	181	58.5
	83	26.5	240.25	24.5	36	83	56.5	3192.25	60	67.5	41	1681.	16	140	179	62
	45	90	529.	23	39	76	14	196.	47	99	9	81.	10	92	131	93
BRITTAN N	94	14	784.	28	39	76	62	3844.	72	48	34	1156.	18	166	205	40.5
	35	109	144.	12	29	99.5	9.5	90.25	35	111.5	2.5	6.25	4	60	99	112.5
	77	34	2652.25	51.5	103	3	31	961	70	54.5	20.5	420.25	23	211	250	16
	50	80.5	90.25	9.5	19	113	32.5	1056.25	22	122.5	42	1764.	6	52	91	119.5
	9	128	100.	10	16	116	12	144.	14	126	2	4.	0	0	39	128
	45	90	600.25	24.5	13	120.5	30.5	930.25	49	96	6	36.	8	68	107	108
	113	3	16.	4	75	24.5	21.5	462.25	87	20.5	17.5	306.25	26	236	275	5.5
	93	16	1.	1	70	28	12	144.	88	19	13	169.	23	207	246	17.5
	77	34	930.25	30.5	63	39.5	5.5	30.25	99	9	25	625.	22	200	239	20
	84	24.5	2025.	45	82	15	9.5	90.25	65	60	35.5	1260.25	21	192	231	23
CROUDACE J	19	125	2500.	50	14	117.5	7.5	56.25	60	67.5	57.5	3306.25	6	54	93	117.5
	52	76	256.	16	42	70.5	5.5	30.25	52	86.5	10.5	110.25	12	104	146	78.5
	63	58	1156.	34	66	33.5	24.5	600.25	60	67.5	9.5	90.25	17	150	189	52
	42	96	3080.25	55.5	43	68	28	784.	96	12.5	83.5	6972.25	16	142	181	58.5
	37	104.5	3481.	59	52	52.5	52	2704.	35	111.5	7	49.	9	85	124	100
	58	68	144.	12	26	105	37	1369.	50	93	25	625.	11	95	134	89
	24	122.5	420.25	20.5	27	102	20.5	420.25	22	122.5	0	0.	4	34	73	124
	67	49	930.25	30.5	59	44.5	4.5	20.25	56	75	26	676.	16	143	182	57
	52	76	2862.25	53.5	26	105	29	841.	71	51.5	24.5	600.25	12	110	149	77
	58	68	4290.25	65.6	48	58.5	9.5	90.25	21	124	56	3136.	10	88	127	85
FLETCHER G.	84	24.5	441.	21	35	85.5	61	3421.	61	64.5	40	1600.	16	141	180	60.5
	43	95	4.	2	26	105	10	100.	39	107	12	144.	8	69	108	107
	38	102	1260.25	35.5	39	76	26	676.	35	111.5	9.5	90.25	8	73	112	104.5
	53	73	625.	25	55	48.5	24.5	600.25	86	23.5	49.5	2450.25	6	55	194	49
	11	127	9.	3	13	120.5	6.5	42.25	29	117.5	9.5	90.25	2	14	53	126
	34	111	3844.	62	33	89.5	21.5	462.25	84	27.5	83.5	6972.25	12	112	151	76
	99	7.5	81.	9	76	23	15.5	240.25	95	14	6.5	42.25	26	231	270	9
	76	38	3080.25	55.5	81	16	22	484.	64	61.5	23.5	552.25	20	182	221	30
	85	23	342.25	18.5	98	5	18	324.	86	23.5	.5	.25	26	230	269	10
	66	52	1722.25	41.5	92	10	42	1764.	71	51.5	.5	.25	21	190	229	24
HALL R	33	113	1681.	41	20	111	2	4.	59	70	43	1849.	8	73	112	104.5
	46	38	625.	25	60	43	5	25.	90	18	20	400.	21	187	226	25
	50	80.5	930.25	30.5	65	35.5	45	2025.	101	5	75.5	5400.25	20	174	216	34
	93	16	552.25	23.5	90	11	5	25.	79	34.5	18.5	342.25	25	223	262	12
	63	58	110.25	10.5	39	76	18	324.	52	86.5	28.5	812.25	13	115	154	71.5
	93	16	1260.25	35.5	46	63	47	2209.	84	27.5	11.5	132.25	20	184	223	28
	45	90	4.	2	27	102	12	144.	42	104	14	196.	8	45	114	103
	40	98	6320.25	79.5	62	41.5	56.5	3192.25	23	121	23	529.	10	86	125	98
	63	58	2916.	54	55	48.5	9.5	90.25	44	102.5	44.5	1980.25	14	123	162	69
	74	44.5	3080.25	55.5	64	37.5	4	16.	50	93	51.5	2652.25	17	149	188	53.5
	49	83.5	784.	28	33	89.5	6	36.	29	117.5	34	1156.	8	72	111	106
	81	29	2704.	52	97	6	23	529.	66	58	29	841.	23	205	244	19
	88	19.5	1056.25	32.5	63	39.5	24	400.	100	7	12.5	156.25	24	212	251	14.5
	71	44	7396.	86	96	7	37	1369.	50	93	49	2401.	20	178	217	32.5
INNES R	66	52	812.25	28.5	79	14.5	32.5	1056.25	42	48	4	16.	20	178	217	32.5
	67	49	56.25	7.5	64	37.5	11.5	132.25	82	30	19	361.	19	174	213	36
	31	117	0.	0	6	127	10	100.	11	127	10	100.	1	9	48	127
	58	68	420.25	20.5	51	55	13	169.	79	34.5	33.5	1122.25	17	144	188	53.5
	28	119	1482.25	38.5	37	81	38	1444.	28	119.5	.5	.25	6	54	93	114.5
	32	115.5	3540.25	59.5	20	111	4.5	20.25	71	51.5	64	4096.	9	84	123	101
	60	61	2500.	25	9	125	64	4096.	56	75	14	196.	10	86	125	98
	13	126	361.	19	29	99.5	26.5	702.25	56	80.5	45.5	2070.25	6	58	97	114.5
	75	41.5	420.25	20.5	75	24.5	17	289.	74	45	3.5	12.25	21	185	224	26
LITTLE D	68	47	1369.	37	78	21	26	676.	66	58	11	121.	19	173	212	37
	95	12	992.25	31.5	38	49.5	67.5	4556.25	72	48	36	1296.	18	166	205	40.5
	32	115.5	420.25	20.5	8	126	10.5	110.25	41	106.5	10	100.	5	41	81	123
	80	30	576.	24	80	17.5	12.5	156.25	76	41.5	11.5	132.25	22	197	236	21.5
	56	71.5	900.	30	18	114.5	57	3249.	52	86.5	15	225.	10	87	126	96
	58	68	64.	8	95	8	60	3600.	93	16	52	2704.	23	207	246	17.5
	52	76	3136.	56	41	73	3	9.	91	17	59	3481.	16	145	184	55.5
	75	41.5	930.25	30.5	46	63	21.5	462.25	80	32.5	9	81.	18	162	201	45
	66	52	841.	29	42	70.5	18.5	342.25	76	41.5	10.5	110.25	16	145	184	55.5
	92	18	650.25	25.5	70	28	10	100.	113	2.5	15.5	240.25	25	226	265	11
	65	54.5	552.25	23.5	35	85.5	31	961.	37	109	54.5	2970.25	11	98	137	87
	77	34	1156.	34	13	120.5	76.5	7582.25	52	86.5	52.5	2756.25	11	103	142	82
NEIL T	47	87	441.	21	30	96	9.	81.	56	75	12.	144.	10	94	133	91.5

XV

D_S

DRAWING TESTS.	PENCIL.				COLOUR.				MEMORY.				TOTAL MARK IN DRAWING 360			Pos^n
	MARK 120.	Pos^n	d²	d	MARK 120.	Pos^n	d	d²	MARK 120.	Pos^n	d	d²				
NICHOLSON. W.	62	60	400·	20	47	60·5	·5	·25	55	80·5	20·5	420·25	14	125	164	67·5
	44	93	14 82·25	38·5	80	17·5	15·5	5400·25	67	56	37	13 69·	17	152	191	51
	38	102	24 50·25	49·5	32	91	11	121·	76	41·5	60·5	3660·25	12	107	146	48·5
	44	93	17 22·25	41·5	47	60·5	32·5	1056·25	89	19	74	5476·	16	141	180	60·5
	48	85	56·25	15	66	33·5	51·5	2652·25	85	26	59	3481·	18	160	199	46·5
	39	100	64·	8	51	55	45	2025·	63	63	37	13 69·	13	114	153	73·5
	76	38	441·	21	44	64	29	841·	73	46	8	64·	17	154	193	50
	50	80·5	529·	23	59	44·5	36	12 96·	60	64·5	13	169·	14	130	169	65
	70	45	256·	16	55	48·5	3·5	12·25	80	38·5	12·5	156·25	18	166	205	40·5
	37	104·5	42·25	6·5	51	55	49·5	2450·25	64	61·5	43	1849·	13	113	152	75
	116	2	58 52·25	76·5	101	4	2	4·	55	80·5	78·5	6162·25	26	233	272	7·5
	56	71·5	144·	12	30	96	24·5	600·25	53	84	12·5	156·25	11	100	139	85
	59	63·5	132·25	11·5	34	87·5	24	576·	47	99	55·5	12 60·25	11	101	140	84
	52	76	144·	12	27	102	26	676·	51	90	14	196·	10	91	130	94
	59	63·5	20·25	4·5	64	32	31·5	992·25	78	36·5	27	729·	18	165	204	43·5
	36	106·5	20·25	4·5	42	70·5	36	12 96·	56	75	34·5	992·25	11	95	134	89
	109	5	25·	5	112	2	3	9·	100	7	2	4·	31	282	321	2
	82	28	146 41·	121	11	123·5	95·5	91 20·25	103	2·5	25·5	650·25	17	157	196	48
ROBSON. J.	69	46	2070·25	45·5	77	22	74·5	5550·25	56	75	29	8 70·	11	99	138	86
	114	1	441·	21	77	22	21	441·	108	1	0	0·	29	263	302	3
	22	124	42·25	6·5	30	96	28	784·	44	102·5	21·5	462·25	6	54	96	116
	38	102	29 70·25	54·5	65	35·5	66·5	44 22·25	51	90	12	144·	13	115	154	71·5
	95	12	272·25	16·5	62	41·5	29·5	870·25	66	58	46	2116·	20	184	223	28
	40	98	3025·	55	70	28	70	4900·	54	83	15	225·	14	125	164	67·5
	24	122·5	342·25	18·5	30	96	26·5	702·25	33	114·5	8	64·	5	48	87	121·5
	76	52	650·25	25·5	42	70·5	18·5	342·25	49	96	44	19 36·	14	128	167	67
	36	106·5	90·25	9·5	30	96	10·5	110·25	42	105·5	1	1·	7	67	106	109
	28	119	461·25	21·5	14	117·5	1·5	2·25	49	96	23	529·	6	52	91	119·5
	40	98	19 36·	44	44	54	41	16 81·	45	101	3	9·	11	95	134	89
	105	6	10 56·25	32·5	44	9	3	9·	76	41·5	35·5	1260·25	26	236	275	5·5
	35	109	83 72·25	91·5	70	28	81	6561·	28	119·5	10·5	110·25	10	94	133	91·5
	64	56	23 52·25	48·5	46	63	7	49·	35	111·5	55·5	30 80·25	12	106	145	80·5
	76	38	17 64·	42	58	46	8	64·	102	4	34	11 56·	22	197	236	21·5
	47	84	812·25	28·5	36	83	4	16·	70	54·5	32·5	10 56·25	13	114	153	73·5
	49	83·5	400·	20	0	128	44·5	19 80·25	38	108	24·5	600·25	5	48	84	121·5
	44	93	45 56·25	64·5	21	109	16	256·	76	41·5	51·5	26 52·25	11	102	141	83
	111	4	100·	10	119	1	3	9·	94	11	7	49·	32	288	321	1
TAIT H.	33	26·5	20 25·	45	45	65·5	39	15 21·	87	20·5	6	36·	22	196	215	35
	79	31·5	22 09·	47	70	28	3·5	12·25	56	75	43·5	18 92·25	17	166	205	40·5
	84	21	3 06·25	14·5	55	48·5	24·5	156·25	81	31	10	100·	20	184	223	28
	47	84	3 42·25	18·5	52	52·5	34·5	11 90·25	54	71	16	256·	15	137	156	70
	52	46	484·	22	48	58·5	17·5	306·25	78	36·5	39·5	15 60·25	15	139	148	63·5
	24	121	1260·25	35·5	31	92·5	28·5	812·25	4	128	4	49·	3	26	65	125
	35	109	484·	22	31	92·5	16·5	2 72·25	33	114·5	5·5	30·25	7	60	99	112·5
	58	68	49·	7	69	31	34	13 69·	77	38	30	900·	18	165	204	43·5
	95	12	4·	2	86	12	0	0·	98	10	2	4·	27	240	279	4
	49	7·5	20 25·	4·5	49	19·5	12	144·	94	15	7·5	56·25	26	233	272	7·5
	65	54·5	44 89·	67	38	79·5	25	625·	46	12·5	42	17 64·	18	100	199	46·5
	96	10	8 12 25	28·5	85	13	3	9·	76	41·5	31·5	9 92·25	24	218	254	13
	86	22	35 40·25	59·5	36	83	61	37 21·	86	23·5	1·5	2·25	19	169	208	38
	50	80·5	1·	1	39	76	4·5	20·25	56	75	5·5	30·25	12	106	145	80·5
	64	49	49·	7	84	14	35	12 25·	100	7	42	17 64·	24	212	251	14·5
YARDLEY.	94	9·	21 62·25	46·5	20	111·	102	1 04 04·	61	64·5	55·5	30 80·25	15	139	178	63·5
Σd²	173,634·5				163,950·75				143,220·75							

$$\rho = 1 - \frac{6 \cdot 173{,}635}{2{,}097{,}000}$$

$$= 1 - \frac{1041810}{2097000}$$

log 1041810 = 6·0179
log 2097000 = 6·3216
log quotient = $\overline{1}$·6963

$$\rho = 1 - ·4969$$

$$\rho = ·50$$

$$r = ·52 \pm ·04$$

$$\rho = 1 - \frac{6 \cdot 163951}{2{,}097{,}000}$$

$$= 1 - \frac{983706}{2097000}$$

log 983706 = 5·9929
log 2097000 = 6·3216
log quotient = $\overline{1}$·6713

$$\rho = 1 - ·4691$$

$$\rho = ·53$$

$$r = ·55 \pm ·04$$

$$\rho = 1 - \frac{6 \cdot 143{,}221}{2{,}097{,}000}$$

$$= 1 - \frac{857326}{2097000}$$

log 857326 = 5·9342
log 2,097,000 = 6·3216
log quotient = $\overline{1}$·6126

$$\rho = 1 - ·4099$$

$$\rho = ·59$$

$$r = ·61 \pm ·04$$

ART TESTS

ART TESTS (OBJECTIVE)	TEST 1 MARK (39)	ORDER	TEST 2 MARK (39)	ORDER	CORRELATION BETWEEN TESTS 1 and 2 — d	d²	Average mark in 1 & 2 (39)	ORDER	TEST 3 (14)	TEST 4 (16)	TEST 5 (10)	TOTAL of 3,4,5 MARK (40)	ORDER	CORRELATION BETWEEN Av. of 1&2 AND 3,4,5 — d	d²	TOTAL MARK TESTS (1&2 average)+3,4,5 (49)	ORDER
ALLAN. A.	28	25.5	18	77.5	52	2704.	23	51	11	8	4	23	111.5	60.5	3660.25	46	85.5
ALLEN. H.	23	76.5	22	29.5	47	2209.	23.5	43.5	10	14	8	32	11.5	32	1024.	55.5	14
APPLEBY. R.	25	54	22	29.5	24.5	600.25	23.5	43.5	8	12	3	23	111.5	68	4624.	46.5	81.5
ARMSTRONG J.	21	97	18	77.5	19.5	380.25	19.5	86.5	11	10	4	25	92.5	6	36.	44.5	97
ALLSOP. J.	19	107	11	124	17	289.	15	118	10	8	6	24	103.5	14.5	210.25	39	118.5
AYNSLEY. H.	28	25.5	27	5	20.5	420.25	27.5	7.5	12	12	8	32	11.5	4	16.	59.5	5
BEAL. A.	32	6	19	61.5	55.5	3080.25	25.5	19.5	9	16	5	30	27	7.5	56.25	55.5	14
BENNET. J.	26	45.5	19	61.5	16	256.	22.5	58	9	6	7	22	116.5	58.5	3422.25	44.5	97
BLAKEY. L.	29	18	19	61.5	43.5	1892.25	24	35.5	11	10	4	25	92.5	57	3249.	49	63.5
BRITTAN. N.	23	76.5	20	47.5	29	841.	21.5	68	11	16	7	34	3.5	64.5	4160.25	55.5	14
BROWN. P.	29	18	12	120	102	10404.	20.5	78	12	12	7	31	19	59	3481.	51.5	42
CARR. J.	25	54	24	17.5	36.5	1332.25	24.5	29	9	10	8	27	68	39	1521.	51.5	42
CARMICHAEL. M.	14	125.5	10	136.5	1	1.	12	128	11	10	4	25	92.5	55.5	1260.25	37	124
CAMPBELL. K.	20	102.5	12	120	17.5	306.25	16	112	11	12	7	30	27	85	7225.	46	85.5
CARPENTER. R.	23	76.5	15	102.5	26	676.	19	94.5	11	12	5	28	54	40.5	1640.25	44	78
CLARK. H.	23	76.5	25	10	66.5	4422.25	24	35.5	9	14	6	29	38	2.5	6.25	53	35.5
COOK. A.	25	54	16	96.5	42.5	1806.25	20.5	78	9	12	5	26	81	3	9.	46.5	81.5
COWAN. R.	24	64	24	17.5	46.5	2162.25	24	35.5	10	12	7	29	38	2.5	6.25	53	35.5
CORRY. G.	26	45.5	21	38	7.5	56.25	23.5	43.5	12	14	5	31	19	24.5	600.25	54.5	25
CROUDACE. J.	29	18	18	77.5	59.5	3540.25	23.5	43.5	7	10	5	22	116.5	73	5329.	45.5	89.5
DARLING. P.	18	110.5	19	61.5	49	2401.	18.5	100.5	12	12	7	31	19	81.5	6642.25	49.5	58
DAVISON. L.	22	89	16	96.5	7.5	86.25	19	94.5	11	12	6	29	38	56.5	3192.25	48	70
DOBSON. K.	33	3.5	20	47.5	44	1936.	26.5	12	8	12	8	28	54	42	1764.	54.5	25
DOUGHTY. W.	23	76.5	18	77.5	1	1.	20.5	78	6	10	3	19	126.5	48.5	2352.25	39.5	115
DUNCAN. J.	27	36	22	29.5	6.5	42.25	24.5	29	11	12	3	26	81	52	2704.	50.5	48.5
ELLIOT. F.	19	107	19	61.5	45.5	2070.25	19	94.5	9	12	3	24	103.5	10	100.	43	102.5
ELLIS. W.	24	36	24	17.5	18.5	342.25	25.5	19.5	8	14	6	28	54	34.5	1190.25	53.5	32.5
FISHER. A.	28	25.5	24	17.5	8	64.	26	14.5	10	12	7	29	38	23.5	552.25	55	19
FINDLAY. J.	20	102.5	10	136.5	24	576.	15	118	10	8	6	24	103.5	14.5	210.25	39	118.5
FLETCHER. G.	27	36	19	61.5	25.5	650.25	23	51	11	12	5	28	54	3	9.	51	45.5
FRANKS. H.	17	115.5	13	114.5	1	1.	15	118	11	8	7	26	81	37	1369.	41	111
FROST. J.	22	89	15	102.5	13.5	182.25	19	94.5	12	12	4	28	54	40.5	1640.25	47	78
GARDNER. R.	27	36	21	38	22	484.	24	35.5	8	10	7	25	92.5	57	3249.	49	63.5
GLOVER. A.	21	97	8	128	31	961.	14.5	122	6	8	5	19	126.5	4.5	20.25	33.5	127
GRAINGER. E.	23	76.5	24	17.5	5.9	34.81	23.5	43.5	12	12	7	31	19	24.5	600.25	54.5	25
GRAY. D.	28	25.5	21	38	2.5	6.25	24.5	29	11	10	4	25	92.5	63.5	4032.25	49.5	58
GIBSON. W.	33	3.5	24	17.5	14	196.	28.5	4	13	16	4	29	38	34	1156.	57.5	4
GOWLAND. H.	23	76.5	19	61.5	15	225.	21	73.5	9	12	6	27	68.5	5	25.	48	70
GRICE. J.	24	64	15	102.5	38.5	1482.25	19.5	86.5	11	10	7	28	54	32.5	1056.25	47.5	74.5
HALL. R.	22	89	16	96.5	7.5	56.25	19	94.5	8	8	0	16	128	33.5	1122.25	35	125
HARDY. R.	30	13	17	89	76	5776.	23.5	43.5	12	10	5	24	68.5	25	625.	50.5	48.5
HILL. R.	26	45.5	19	61.5	16	256.	22.5	58	9	16	8	33	7	51	2601.	55.5	14
HARDING. D.	24	64	20	47.5	16.5	272.25	22	63	10	14	5	29	38	25	625.	51	45.5
HEATHERINGTON A.	24	64	21	38	26	676.	22.5	58	10	16	1	27	68.5	10.5	110.25	49.5	58
HEDWORTH. I.	28	25.5	20	47.5	22	484.	24	35.5	10	14	7	31	19	16.5	272.25	55	19
HORNSBY. S.	21	97	22	29.5	67.5	4556.25	21.5	68	9	8	3	20	123	55	3025.	44.5	108
HOWE. M.	22	89	16	96.5	7.5	56.25	19	94.5	7	14	4	25	92.5	2	4.	44	99.5
HOWE. R.	22	89	23	24	6.5	42.25	22.5	58	10	12	4	26	81	23	529.	48.5	66.5
HUNTER. G.	30	13	22	29.5	16.5	272.25	26	14.5	9	10	5	24	103.5	89	7921.	50	52
HUNTER. J.	18	110.5	17	89	21.5	462.25	17.5	104.5	7	14	7	28	54	50.5	2550.25	45.5	89.5
HUDDLESTONE. N.	27	36	27	5	31	961.	27	10	11	8	9	28	54	44	1936.	55	19
HUGHES. F.	38	1	25	10	9	81.	31.5	1	13	12	6	31	19	18	324.	62.5	2
HYSLOP. D.	17	115.5	17	89	26.5	702.25	17	107.5	12	14	5	31	19	88.5	7832.25	48	70
INNES. R.	31	8.5	27	5	3.5	12.25	29	3	11	14	8	33	7	4	16.	62	3
JOHNSON. W.	31	8.5	19	61.5	53	2809.	25	24.5	10	14	5	29	38	13.5	182.25	54	30
JEFFERSON. R.	15	121.5	15	102.5	19	361.	15	118	8	14	4	26	81	37	1369.	41	111
KERSLEY. S.	22	89	30	1	88	7744.	26	14.5	11	14	4	29	38	23.5	552.25	55	19
KINGHORN W.	14	125.5	11	124	1.5	2.25	12.5	124	11	10	4	25	92.5	34.5	1190.25	37.5	123
KIRCUR. K.	14	125.5	16	96.5	29	841.	15	118	11	10	3	24	103.5	14.5	210.25	39	118.5
KNOW. W.	17	115.5	11	124	8.5	72.25	14	124.5	10	12	4	26	81	43.5	1892.25	40	114
LANE. B.	25	54	19	61.5	7.5	56.25	24	10	9	10	4	23	111.5	101.5	10302.25	50	52
LEACH. A.	22	89	25	10	7.5	56.25	23.5	43.5	12	6	6	24	103.5	60	3600.	47.5	74.5
LITTLE. D.	30	13	21	38	2.5	6.25	25.5	19.5	8	14	8	30	27	7.5	56.25	55.5	14
LOWSON. J.	21	97	14	108.5	11.5	132.25	17.5	104.5	11	12	5	28	54	50.5	2550.25	45.5	89.5
MANN. I	16	119.5	19	61.5	58	3364.	17.5	104.5	12	14	4	30	27	77.5	6006.25	47.5	74.5
MALLABURN. R.	30	13	24	17.5	4.5	20.25	27	10	9	12	3	24	103.5	93.5	8742.25	51	45.5
MAXWELL. A.	18	110.5	16	96.5	14	196.	17	107.5	7	12	3	22	116.5	9	81.	39	118.5
MARSH. S.	25	54	21	48	6	36.	23	51	10	16	6	32	11.5	39.5	1560.25	55	19
McCALLA. A.	24	36	23	24	12	144.	25	24.5	10	16	3	29	38	13.5	182.25	54	30
McCULLEY. K.	21	97	22	29.5	67.5	4556.25	21.5	68	12	12	9	33	7	61	3721.	54.5	25
MELVIN. S.	20	102.5	17	89	13.5	182.25	18.5	100.5	10	16	5	31	19	81.5	6642.25	44.5	58
MINNIKIN. R.	24	36	23	24	12	144.	25	24.5	12	10	5	24	68.5	44	1936.	52	40
MOLE. H.	29	18	20	47.5	29.5	870.25	24.5	29	9	8	8	25	92.5	63.5	4032.25	49.5	58
NAYLOR. R	28	25.5	21	38	12.5	156.25	24.5	29	9	10	8	24	68.5	39.5	1560.25	51.5	42
NEIL. T.	28	25.5	19	61.5	36	1296.	23.5	43.5	12	14	5	31	19	24.5	600.25	54.5	25

ART TESTS [OBJECTIVE]	TEST 1 MARK	ORDER	TEST 2 MARK	ORDER	d	d²	Average mark in order 1&2	ORDER	TEST 3	TEST 4	TEST 5	TOTAL OF 3.4.5 MARK	ORDER	d	d²	TOTAL MARK TESTS (1+2 average) 3.4.5	ORDER
	39		39				39		14	16	10	40				79	
NICHOLSON H	20	20.25	13	114.5	12	144.	16.5	109	9	12	8	29	38	71	5041.	45.5	89.5
PARKER R	25	54	19	61.5	7.5	56.25	22	63	9	12	5	26	81	18	324.	48	70
PARKER N	14	125.5	12	120	5.5	30.25	13	126	8	4	6	18	127	1	1.	31	128
PEART J	26	45.5	20	47.5	2	4.	23	51	7	10	7	24	103.5	52.5	2756.25	47	78
PATTERSON J	24	36	12	120	84	7056.	14.5	86.5	9	12	6	27	68.5	18	324.	46.5	81.5
PETERS A	23	76.5	15	102.5	26	676.	19	94.5	8	10	9	27	68.5	26	676.	46	85.5
PRINGLE R	20	102.5	19	61.5	41	1681.	19.5	86.5	7	14	7	28	54	32.5	1056.28	47.5	74.5
PRITCHARD K	26	45.5	13	114.5	69	4761.	19.5	86.5	12	8	3	23	111.5	45	2025.	42.5	104
RICHARDSON A	28	25.5	24	17.5	8	64.	26	14.5	8	10	4	27	68.5	54	2916.	53	35.5
RICHARDSON G.H	29	18	19	61.5	43.5	1892.25	24	35.5	9	10	5	24	103.5	68	4624.	48	70
RICHARDSON A.C	27	36	21	38	2	4.	24	35.5	9	10	8	27	68.5	33	1089.	51	45.5
RICHMOND H	22	89	18	77.5	11.5	132.25	20	82	12	10	3	25	92.5	10.5	110.25	45	93.5
RICKLETON J	24	64	18	77.5	13.5	182.25	21	73.5	11	14	4	29	38	35.5	1260.25	50	52
RANSON A	20	102.5	18	77.5	25	625.	19	94.5	11	12	8	31	19	75.5	5700.25	50	52
REED B	27	36	18	77.5	41.5	1722.25	22.5	58	9	10	3	22	116.5	58.5	3422.25	44.5	97
ROBINSON J	25	54	14	108.5	54.5	2970.25	14.5	86.5	8	14	7	29	38	48.5	2352.25	48.5	66.5
ROBERTSON R	23	76.5	19	61.5	15	225.	21	73.5	11	10	7	28	54	14.5	380.25	49	63.5
ROBERTSON A	23	76.5	22	29.5	47	2209.	22.5	58	13	12	2	27	68.5	10.5	110.25	49.5	58
ROBSON J	24	64	27	5	69	3481.	25.5	19.5	11	12	6	29	38	18.5	342.25	54.5	25
ROSENBLOOM B	25	54	13	114.5	60.5	3660.25	19	94.5	13	8	5	26	81	13.5	182.25	45	93.5
ROWELL C	18	110.5	14	108	2	4.	16	112	9	10	7	26	81	31	961.	42	105.5
RUSSELL H	23	76.5	17	89	12.5	156.25	20	82	6	12	3	21	120	38	1444.	41	111
SALKELD B	24	64	17	89	25	625.	20.5	78	11	8	2	21	120	42	1764.	41.5	108
SCOTT W	28	25.5	17	89	63.5	4032.25	22.5	58	10	14	6	30	27	31	961.	52.5	38.5
SINCLAIR E	17	115.5	12	120	4.5	20.25	14.5	122	8	12	4	24	103.5	18.5	342.25	38.5	172
SHARPE F	24	64	14	108.5	44.5	1980.25	19	94.5	10	10	6	26	81	13.5	182.25	45	93.5
SPIRES H	14	125.5	14	108.5	17	289.	14	124.5	6	12	7	25	92.5	32	1024.	39	118.5
STOBBS S	17	115.5	15	102.5	13	169.	16	112	8	14	4	26	81	31	961.	42	105.5
STORY A	23	76.5	18	77.5	1	1.	20.5	78	10	14	8	32	11.5	66.5	4422.25	52.5	38.5
STOKOE W	31	8.5	25	10	1.5	2.25	28	5.5	13	10	6	29	38	32.5	1086.25	57	8.5
SUNDERLAND C	17	115.5	19	61.5	54	2916.	18	102	13	12	3	28	54	48	2304.	46	85.5
STEPHEN W	14	125.5	17	89	36.5	1332.25	15.5	115	10	10	8	28	54	61	3721.	43.5	101
SWAN G	30	13	20	47.5	34.5	1190.25	25	24.5	11	14	8	33	7	17.5	306.25	58	6
STEPHENSON A	24	64	22	29.5	34.5	1190.25	23	51	10	14	9	33	7	44	1936.	56	11
THOMAS G	25	54	18	77.5	23.5	552.25	21.5	68	9	10	1	20	123	55	3025.	41.5	108
TINDALL J	22	89	18	77.5	11.5	132.25	20	82	8	12	5	25	92.5	10.5	110.25	45	93.5
THOMPSON F	33	3.5	27	5	1.5	2.25	30	2	9	12	6	27	68.5	66.5	4422.25	57	8.5
TAIT H	26	45.5	25	10	35.5	1260.25	25.5	19.5	11	12	6	29	38	18.5	342.25	54.5	25
TRUEMANN G	33	3.5	18	61.5	58	3364.	25.5	14.5	10	12	6	28	54	34.5	1190.25	53.5	32.5
TAYLOR R	22	89	24	17.5	71.5	5112.26	23	51	4	8	4	21	120	69	4761.	44	94.5
WHITE A	24	64	18	77.5	13.5	182.25	21	73.5	12	12	5	29	38	35.5	1260.25	50	52
WILSON J	26	45.5	18	77.5	32	1024.	22	63	8	14	5	27	68.5	5.5	30.25	49	63.5
WAKE H	16	119.5	13	114.5	5	25.	14.5	122	7	6	7	20	123	1	1.	34.5	126
WIGHTMAN D	19	107	13	114.5	7.5	56.25	16	112	10	10	7	27	68.5	43.5	1892.25	43	102.5
WIGHTLAN R	15	121.5	17	89	32.5	1056.25	16	112	8	8	7	23	111.5	.5	.25	39	118.5
WILKINSON J	24	64	19	61.5	2.5	6.25	21.5	68	11	8	6	25	92.5	24.5	600.25	46.5	81.5
WATSON J	23	76.5	20	47.5	29	841.	21.5	68	14	14	7	35	1.5	66.5	4422.25	56.5	10
WALTON W	31	8.5	24	17.5	9	81.	27.5	7.5	11	16	7	34	3.5	4	16.	61.5	4
WALLACE A	22	89	14	108.5	19.5	380.25	17.5	104.5	9	10	4	23	111.5	7	44.	40.5	113
WRIGHT E	27	36	21	38	2	4.	24	35.5	14	8	7	29	38	2.5	6.25	53	35.5
WALTON D	23	76.5	20	47.5	29	841.	21.5	68	8	14	6	28	54	14	196.	49.5	58
WATSON C	28	25.5	23	2	23.5	552.25	28	5.5	12	14	9	35	1.5	4	16.	63	1
YARDLEY R	26	45.5	20	47.5	2	4.	23	51	10	14	7	31	19	32	1024.	54	30

Σd^2 : 161,580.   239,306.25

$$\rho = 1 - \frac{6.161580}{2,097,000}$$

$$= 1 - \frac{969480}{2,097,000}$$

$\log 969480 = 5.9865$
$\log 2097000 = 6.3216$
$\log \text{quotient} = \bar{1}.6649$

$$\rho = 1 - .4623$$

$$\rho = .54$$

$$r = .56 \pm .04$$

$$\rho = 1 - \frac{6.239,306}{2,097,000.}$$

$$= 1 - \frac{1435836.}{2,097,000}$$

$\log 1435836 = 6.1571.$
$\log 2097000 = 6.3216.$
$\log \text{quotient} = \bar{1}.8355.$

$$\rho = 1 - .6847$$

$$\rho = .32$$

$$r = .33 \pm .05$$

INTER-CORRELATION OF DRAWING ABILITY WITH RESULTS OF ART TESTS

	DRAWING ABILITY (AVERAGE) D_s AND ART TESTS 1 and 2 A_0 1+2		DRAWING ABILITY (AVERAGE) D_s AND ART TESTS 3.4.5. A_0 3.4.5.	
	d	d^2	d	d^2
ALLAN A	20	400.	80.5	6480.25
	54.5	2970.25	86.5	7682.25
	67.5	4556.25	.5	.25
	15.5	240.25	9.5	90.25
	3.5	12.25	11	121.
	102.5	10506.25	98.5	9702.25
	39	1521.	31.5	992.25
	4	16.	54.5	2970.25
	57.5	3306.25	.5	.25
	27.5	756.25	37	1369.
	34.5	1190.25	93.5	8742.25
	13	169.	52	2704.
	8.5	72.25	27	729.
	16	256.	101	10201.
	13.5	182.25	54	2916.
	30	900.	32.5	1056.25
	60.5	3660.25	63.5	4032.25
	15.5	240.25	18	324.
	23.5	552.25	4	16.
	74	5476.25	1	1.
	22	484.	59.5	3540.25
	42.5	1806.25	14	196.
	46.5	2162.25	4.5	20.25
	22	484.	26.5	702.25
	60	3600.	8	64.
	29.5	870.25	20.5	420.25
	37.5	1406.25	3	9.
FISHER A	62.5	3906.25	39	1521.
	23	529.	8.5	72.25
	9.5	90.25	6.5	42.25
	11	121.	26	676.
	10	100.	50.5	2550.25
	13.5	182.25	43.5	1892.25
	4	16.	.5	.25
	32.5	1056.25	57	3249.
	20	400.	83.5	6970.25
	26	676.	8	64.
	62.5	4032.25	58.5	3420.25
	62.5	3906.25	30	900.
	10	100.	23.5	552.25
	18.5	342.25	43.5	1892.25
	24	576.	27	729.
	51	2601.	26	676.
	13.5	182.25	3	9.
	7.5	56.25	9	81.
	35	1225.	20	400.
	3.5	12.25	5.5	30.25
	11	121.	12	144.
	49	2401.	50	2500.
	1.5	2.25	52	2704.
	9	81.	35	1225.
	13.5	182.25	4.5	20.25
	7.5	56.25	13.5	182.25
INNES R	29.5	870.25	28.5	650.25
	11.5	132.25	2	4.
	9	81.	46	2116.
	49	2401.	15.5	240.25
	9.5	90.25	25	625.
	17	289.	2.5	6.25
	26.5	702.25	10	100.
	104.5	10920.25	3	9.
	17.5	306.25	77.5	6006.25
	17.5	306.25	10	100.
	64	4096.	13.5	182.25
	18.5	342.25	96	9216.
	11.5	132.25	82	6724.
	11.5	132.25	20.5	306.25
	33.5	1122.25	6	36.
	31	961.	17.5	1306.25
	23	529.	38	1444.
	4.5	20.25	36.5	1332.25
	13.5	182.25	57.5	3306.25
	58	3364.	5.5	30.25
	53	2809.	13.5	182.25
NEIL T	48	2304.	72.5	5256.25

CORRELATIONS BETWEEN

D_s AND $A_{1.2}$

D_s AND $A_{3.4.5.}$

	DRAWING ABILITY (AVERAGE) Ds. AND ART TESTS 1 and 2 A_{o1o2}		DRAWING ABILITY (AVERAGE) As. AND ART TESTS 3.4.5. $A_{o3.4.5}$	
	d	d^2	d	d^2
NICHOLSON. W.	41.5	17 22.25	29.5	8 70.25
	12	1 44	30	900
	47.5	22 56.25	48.5	23 52.25
	8.5	72.25	43	18 49
	40	16 00	22	4 84
	21	4 41	5	25
	36.5	13 32.25	4	16
	21.5	4 62.25	46.5	21 62.25
	26	6 76	28	7 84
	39.5	15 60.25	28.5	8 12.25
	28	7 84	61	37 21
	3	9	7.5	56.25
	10.5	1 10.25	46	21 16
	.5	.25	7.5	56 25
	14.5	2 10.25	73	53 29
	2.5	6.25	51	26 01
	71.5	51 12.25	52	27 04
	10	100	20.5	4 20.25
ROBSON. J.	66.5	44 22.25	48	23 04
	91.5	83 72.25	78	60 84
	4	16	35	12 25
	10.5	1 10.25	48.5	23 52.25
	50	25 00	92	84 64
	9.5	90.25	40.5	16 40.25
	.5	.25	18	3 24
	27.5	7 56.25	14	1 96
	15.5	2 40.25	16.5	2 72.25
	7.5	56.25	38.5	14 82.25
	11	121	77.5	60 06.25
	0	0	32.5	10 56.25
	9.5	90.25	37.5	14 06.25
	34.5	11 90.25	26.5	7 02.25
	3	9	14.5	2 10.25
STEPHENSON. A.	22.5	5 06.25	66.5	44 22.25
	53.5	28 62.25	1.5	2.25
	1	1	9.5	90.25
	1	1	67.5	45 56.25
	15.5	2 10.25	3	9
	21	4 41	13.5	1 82.25
	23	5 29	92	84 64
	3.5	12.25	32	10 24
	.5	.25	5	25
	3	9	2	4
	.5	.25	44	19 36
	68.5	46 92.25	68	46 24
	64	40 96	88.5	78 32 25
	60.5	36 60.25	6	36
	39	15 21	43	18 49
	91.5	83 72.25	98.5	97 02.25
	2.5	6.25	0	0
	12.5	156.25	26.5	7 02.25
	9	81	13	1 69
YARDLEY. R.	12.5	156.25	44.5	19 80.25

Left:

$$17\,1,9\,34.5$$

$$\rho = 1 - \frac{6.171935}{2,097,000}$$

$$= 1 - \frac{1031610}{2,097,000}$$

$\log 1031610 = 6.0137$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \overline{1}.6921$

$$\rho = 1 - .4921$$

$$\rho = .51$$

$$r = .53 \pm .04$$

Right:

$$24\,99\,44.75$$

$$\rho = 1 - \frac{6.249.945}{2,097,000}$$

$$= 1 - \frac{1499670}{2,097,000}$$

$\log 1499670 = 6.1761$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \overline{1}.8543$

$$\rho = 1 - .7153$$

$$\rho = .28$$

$$r = .29 \pm .05$$

AND CONSTRUCTION OF COMPOSITE ARTISTIC ABILITY LIST. INVOLVING Ds AND Ao WITH EQUAL WEIGHTS

Name	321 / 288	Ds.	Ds		Ao		d	d²		
ALLAN. A.		180	20	31	15	88.5	54.5	29 70.25	35	54
		86	10	98	24.5	14	84	70 56	34.5	56
		61	7	111	15.5	81.5	29.5	8 70.25	22.5	102
		83	9	102	13.5	97	5	25	22.5	102
		58	6	114.5	8	118.5	4	16	14	120
		62	7	110	23.5	5	105	110 25	35.5	51.5
		124	16	58.5	24.5	14	44.5	19 80.25	40.5	34.5
		140	16	62	13.5	97	35	12 25	29.5	80.5
		92	10	93	18	63.5	29.5	8 70.25	28	86
		166	18	40.5	24.5	14	25.5	6 50.25	42.5	27
		60	7	112.5	20.5	42	69.5	48 30.25	27.5	88
		211	23	16	20.5	42	26	676	43.5	23.5
		52	6	119.5	6	124	11.5	20.25	12	124
		0	0	128	15	88.5	42.5	18 06.25	15	118.5
		68	8	108	16	78	30	900	24	97.5
		236	26	5.5	22	36.5	30	900	48	10
		204	23	17.5	15.5	81.5	64	40 96	38.5	40.5
		200	22	20	22	36.5	15.5	240.25	44	21.5
		192	21	23	23.5	25	2	4	44.5	19
CROUDACE. J.		54	6	117.5	14.5	89.5	28	784	20.5	105
		107	12	78.5	18.5	58	19.5	380.25	30.5	75.5
		150	17	52	17	70	18	324	34	59
		142	16	58.5	23.5	25	33.5	11 22.25	39.5	37.5
		85	9	100	8.5	115	15	225	14.5	112
		95	11	89	19.5	48.5	40.5	16 40.25	30.5	75.5
		34	4	124	12	102.5	24.5	462.25	16	116
		163	16	57	22.5	32.5	24.5	600.25	38.5	40.5
		110	12	77	24	19	8	64	36	48
		88	10	96	8	118.5	23.5	552.25	18	110
		141	16	60.5	20	45.5	15	225	36	48
		69	8	107	10	111	4	16.25	18	110
		73	8	104.5	16	78	26.5	702.25	24	97.5
		55	6	49	19	63.5	14.5	210.25	25	93
		14	2	126	2.5	127	1	1	4.5	128
		112	12	76	23.5	25	51	26 01	35.5	57.5
		231	26	9	18.5	58	49	24 01	44.5	19
		182	20	30	26.5	7	23	529	46.5	13
		230	26	10	17	70	60	3600	43	25
HALL. R.		190	21	24	16.5	74.5	50.5	25 50.25	37.5	44.5
		73	8	104.5	4	125	20.5	420.25	12	124
		187	21	25	19.5	48.5	23.5	552.25	40.5	34.5
		177	20	34	24.5	14	20	400	44.5	19
		223	25	12	20	45.5	33.5	11 22.25	45	17
		115	13	71.5	18.5	58	13.5	182.25	31.5	71.5
		184	20	28	24	19	9	81	44	21.5
		75	8	103	10.5	108	5	25	18.5	108
		86	10	98	13	99.5	1.5	2.25	23	99.5
		123	14	69	17.5	66.5	2.5	6.25	31.5	71.5
		149	17	53.5	19	52	1.5	2.25	36	48
		72	8	106	14.5	89.5	16.5	272.25	22.5	102
		205	23	19	24	19	0	0	47	11.5
		212	24	14.5	31.5	2	12.5	1 56.25	55.5	3
		178	20	31.5	17	70	37.5	14 06.25	37	46
INNES. R.		178	20	32.5	31	3	29.5	8 70.25	51	6
		174	19	36	23	30	6	36	42	29.5
		9	1	127	10	111	16	256	11	126
		149	17	53.5	24	19	34.5	11 90.25	41	32.5
		54	6	117.5	6.5	123	5.5	30.25	12.5	121.5
		84	9	101	8	118.5	17.5	306.25	17	114
		86	10	98	9	114	16	256	19	106.5
		58	6	114.5	19	52	62.5	39 06.25	25	93
		185	21	26	16.5	74.5	48.5	23 52.25	37.5	44.5
		173	19	37	24.5	14	23	529	43.5	23.5
		166	18	40.5	14.5	89.5	49.5	24 50.25	32.5	67.5
		41	5	123	16.5	74.5	48.5	23 52.25	21.5	104
		197	22	21.5	20	45.5	24	576	42	29.5
		87	10	96	8	118.5	22.5	5 06.25	18	110
		207	23	17.5	24	19	1.5	2.25	47	11.5
		145	16	55.5	23	30	25.5	650.25	39	39
		162	18	45	23.5	25	20	400	41.5	31
		145	16	55.5	18.5	58	2.5	6.25	34.5	56
		226	25	11	21	40	29	841	46	14.5
		98	11	87	13.5	58	19	361	29.5	80.5
		103	11	82	20.5	42	40	1600	31.5	71.5
NEIL. T.		94	10	91.5	23.5	25	66.5	44 22.25	33.5	62.5

XXI

INTER-CORRELATION OF D_s AND A_o AND FORMATION OF A_c

A_c

	D_s	A_s		A_o		d	d^2	A_c	
	288								
NICHOLSON H	125	14	67.5	14.5	89.5	22	484.	28.5	83.5
	152	17	51	17	70	19	361.	34	59
	107	12	78.5	0	128	50.5	2550.25	12	124
	141	16	60.5	16	78	17.5	306.25	32	69
	160	18	46.5	15.5	81.5	35	1225.	33.5	62.5
	114	13	73.5	15	85.5	12	144.	28	86
	154	17	80	16.5	74.5	24.5	600.25	33.5	62.5
	130	14	65	11.5	104	39	1521.	25.5	90
	166	18	40.5	22	36.5	5	25.	40	36
	113	13	75	17	70	5	25.	30	78.5
	233	26	7.5	20	48.5	38	1444.	46	14.5
	100	11	85	14	93.5	8.5	72.25	25	93
	101	11	84	19	52	32	1024.	30	78.5
	91	10	94	19	52	42	1764.	29	82
	165	18	43.5	13.5	97	53.5	2862.25	31.5	71.5
	95	11	89	17.5	66.5	22.5	506.25	28.5	83.5
	282	31	2	18	63.5	61.5	3782.25	49	7.5
	157	17	48	18.5	58	10	100.	35.5	51.5
ROBSON J	99	11	86	23.5	25	61	3721.	34.5	56
	263	29	3	14	93.5	90.5	8190.25	43	25
	57	6	116	11	105.5	10.5	110.25	17	114
	115	13	71.5	10	111	39.5	1560.25	23	99.5
	184	20	28	10.5	108	80	6400.	30.5	75.5
	125	14	67.5	21.5	38.5	29	841.	35.5	51.5
	48	5	121.5	7.5	122	.5	.25	12.5	121.5
	128	14	67	14	93.5	26.5	702.25	28	86
	67	7	109	8	118.5	9.5	90.25	15	118.5
	52	6	114.5	11	105.5	14	196.	17	114
	95	11	89	21.5	38.5	50.5	2550.25	32.5	67.5
	236	26	8.5	26	8.5	3	9.	52	4
	94	10	91.5	15	85.5	6	36.	25	93
	106	12	80.5	12.5	101	21.5	462.25	24.5	96
	197	22	21.5	27	6	15.5	240.25	44	7.5
STEPHENSON A	114	13	73.5	25	11	62.5	3906.25	38	42.5
	48	5	121.5	10.5	108	13.5	182.25	15.5	117
	102	11	83	14	93.5	10.5	110.25	25	93
	288	32	1	26	8.5	7.5	56.25	58	1
	146	22	35	23.5	25	10	100.	45.5	16
	166	17	40.5	22.5	32.5	8	64.	39.5	37.5
	184	20	28	13	94.5	71.5	5112.25	33	67.5
	137	15	70	19	52	18	324.	34	59
	139	15	63.5	18	63.5	0	0.	33	67.5
	26	3	125	3.5	126	1	1.	6.5	127
	60	7	112.5	12	102.5	10	100.	19	106.5
	165	18	43.5	3	118.5	75	5625.	26	89
	240	27	4	15.5	81.5	77.5	6006.25	42.5	27
	233	26	7.5	25.5	10	2.5	6.25	51.5	5
	160	18	46.5	30.5	4	42.5	1806.25	18.5	62.5
	218	24	13	4.5	113	100	10000.	33.5	62.5
	169	19	38	22	36.5	2.5	6.25	41	32.5
	106	12	80.5	18.5	58	22.5	506.25	30.5	75.5
	212	24	14.5	32.	1	13.5	182.25	56	2
YARDLEY R.	139	15	63.5	23	30	33.5	1122.25	38	42.5
Σd^2							166,803.25		

$$\rho = 1 - \frac{6 \cdot 166803}{2,097,000}$$

$$= 1 - \frac{1,000,820}{2,097,000}$$

$\log 1000820 = 6.0004$
$\log 2097000 = 6.3216$
$\log \text{quotient} = \bar{1}.6788.$

$$\rho = 1 - .4773$$

$$\rho = .52$$

$$r = .54 \pm .04$$

ALSO BY SPEARMAN'S FORMULA FOR THE CORRELATION OF SUMS.

Since $r_{A_{12}\cdot D_s} = .53$

$r_{A_{345}\cdot D_s} = .29$

$r_{A_{12}\cdot A_{345}} = .33$

$$r_{A_o D_s} = \frac{.53 + .29}{\sqrt{2(1 + .33)}}$$

$$= .50$$

The approximation shown here may be due to the fact that this formula applies strictly when standard deviations and not simply ranges are adjusted to equality.

CORRELATION OF D_s WITH A_o

	INTELLIGENCE AND PENCIL		INTELLIGENCE AND COLOUR		INTELLIGENCE AND MEMORY	
	d	d^2	d	d^2	d	d^2
ALLAN. A.	55.5	3080.25	36	1296	63.5	4032.25
	98	9604	50.5	2550.25	84	7056
	18.5	342.25	25	625	43	1849
	72	5625	46.5	2162.25	39.5	1560.25
	52	2704	47.5	2256.25	23	529
	36	1296	96	9216	88.5	7832.25
	47.5	2256.25	41	1681	15.5	240.25
	33.5	1122.25	23	529	7.5	56.25
	60.5	3660.25	46.5	2162.25	69.5	4830.25
	9.5	90.25	71.5	5112.25	43.5	1892.25
	74.5	5550.25	65	4225	77	5929
	28	784	3	9	46.5	2162.25
	.5	.25	33	1089	42.5	1806.25
	57	3249	45	2025	55	3025
	25.5	650.25	56	3136	31.5	992.25
	86.5	7582.25	65	4225	69	4761
	7.5	56.25	4.5	20.25	5.5	30.25
	50.5	2550.25	45	2025	75.5	5700.25
	13.5	182.25	4	16	49	2401
	86	7396	78.5	6162.25	38.5	1482.25
	24	576	29.5	870.25	13.5	182.25
	54	2916	78.5	6162.25	44.5	1980.25
	84	7056	56	3136	.5	.25
	66.5	4422.25	14.5	210.25	73.5	5402.25
	11.5	132.25	48.5	2352.25	36.5	1332.25
	60.5	3660.25	40	1600	60.5	3660.25
	3.5	12.25	1	1	29.5	1870.25
FISHER. A.	52.5	2756.25	81.5	6642.25	28	784
	26.5	702.25	36	1296	29.5	870.25
	12	144	49	2401	28	784
	14	196	24	576	26	676
	5	25	31	961	4.5	20.25
	72	5184	47.5	2256.25	22.5	506.25
	1	1	5.5	30.25	8.5	72.25
	104	10816	82.5	6806.25	20.5	420.25
	109.5	11990.25	94	8836	103	10609
	28.5	812.25	6.5	42.25	52	2704
	81	6561	99	9801	80.5	6480.25
	19	361	23	529	18.5	342.25
	26	676	24	576	17	289
	30	900	35	1225	10	100
	13.5	182.25	31.5	992.25	62	3844
	100	10000	105	11025	81.5	6642.25
	34	1156	16	256	5.5	30.25
	6	36	41	1681	5.5	30.25
	60.5	3660.25	72.5	5256.25	74.5	5550.25
	52.5	2756.25	4	16	75.5	5700.25
	53	2809	62.5	3906.25	8.5	72.25
	35.5	1260.25	39.5	1560.25	16	256
	31.5	992.25	37.5	1406.25	65.5	4290.25
	29	841	52	2704	0	0
	32.5	1056.25	12.5	156.25	45	2025
	33	1089	70	4900	16	256
INNES. R.	15.5	240.25	17	289	11.5	132.25
	23.5	552.25	12	144	4.5	20.25
	7.5	56.25	17.5	306.25	17.5	306.25
	51	2601	38	1444	17.5	306.25
	4	16	42	1764	3.5	12.25
	4.5	20.25	9	81	68.5	4692.25
	30	900	34	1156	16	256
	47	2209	20.5	420.25	1.5	2.25
	20.5	420.25	3.5	12.25	24	576
	15.5	240.25	10.5	110.25	26.5	702.25
	71	5041	3.5	12.25	35	1225
	26	676	36.5	1332.25	16	256
	2.5	6.25	10	100	14	196
	2.5	6.25	45.5	2070.25	17.5	306.25
	22.5	506.25	37.5	1406.25	29.5	870.25
	38.5	1482.25	41.5	1722.25	97.5	9506.25
	54.5	2970.25	33	1089	63.5	4032.25
	0	0	18.5	342.25	10.5	110.25
	25	625	15	225	40.5	1640.25
	60	3600	29	841	5.5	30.25
	29.5	870.25	116	13456	82	6724
NEIL. T.	70	4900	19	641	58	3364

INTER-CORRELATION OF DRAWING TESTS AND "INTELLIGENCE"

	INTELLIGENCE AND Pencil		INTELLIGENCE AND Colour		INTELLIGENCE AND Memory	
	d	d^2	d	d^2	d	d^2
NICHOLSON W	28.5	812.25	29	841.	49	2401.
	12	144.	87.5	7656.25	49	2401.
	25.5	650.25	36.5	1332.25	86	7396.
	22	484.	10.5	110.25	52	2704.
	44	1936.	7.5	56.25	15	225.
	65.5	4290.25	20.5	420.25	28.5	812.25
	64.5	4160.25	35.5	1260.25	56.5	3192.25
	37.5	1406.25	73.5	5402.25	50.5	2550.25
	17	289.	13.5	182.25	29.5	870.25
	84.5	7140.25	35	1225.	41.5	1722.25
	47.5	2256.25	45.5	2070.25	31	961.
	53	2809.	28.5	812.25	40.5	1640.25
	23.5	552.25	.5	.25	12	144.
	18.5	342.25	7.5	56.25	4.5	20.25
	56.5	3192.25	88	7744.	83.5	6972.25
	47.5	2256.25	11.5	132.25	16	256.
	9	81.	12	144.	7	49.
	25	625.	119.5	14280.25	.5	.25
ROBSON J	44	1936.	118.5	14042.25	73	5329.
	44.5	1980.25	23.5	552.25	44.5	1980.25
	26	676.	2	4.	4.5	20.25
	17.5	306.25	49	2401.	8.5	30.25
	62	3844.	32.5	1056.25	16	256.
	15	225.	85	7225.25	30	900.
	29.5	870.25	3	9.	21.5	462.25
	48	2304.	29.5	870.25	4	16.
	51.5	2652.25	41.5	1681.	50.5	2550.25
	8.5	72.25	10	100.	31.5	992.25
	2	4.	43	1849.	1	1.
	100	10000.	97	9409.	64.5	4160.25
	92	8464.	11	121.	102.5	10506.25
	53.5	2862.25	46.5	2162.25	2	4.
	64.5	4160.25	56.5	3192.25	98.5	9702.25
STEPHENSON A	13	169.	9	81.	19.5	380.25
	70.5	4970.25	115	13225.	95	9025.
	43.5	1892.25	59.5	3540.25	8	64.
	37	1369.	40	1600.	30	900.
	17	289.	56	3136.	11	121.
	33	1089.	36.5	1332.25	10.5	110.25
	56	3136.	28.5	812.25	46	2116.
	16	256.	18.5	342.25	0	0.
	28	784.	10.5	110.25	11.5	132.25
	102	10404.	73.5	5402.25	109	11881.
	11	121.	27.5	756.25	5.5	30.25
	54	2916.	91	8281.	84	7056.
	42	1764.	42	1764.	44	1936.
	18	324.	26	676.	10.5	110.25
	7.5	56.25	17.5	306.25	49.5	2450.25
	87	7569.	84	7056	55.5	3080.25
	102.5	10506.25	41.5	1722.25	101	10201.
	6.5	42.25	2	4.	1	1.
	59	3481.	94	8836.	101	10201.
YARDLEY R	47.5	2256.25	54.5	2970.25	8	64.

Intelligence and Pencil	Intelligence and Colour	Intelligence and Memory
298,636.5	298698.75	291,303.5

$$\rho = 1 - \frac{6.298637}{2.097.000} \qquad \rho = 1 - \frac{6.298699}{2.097000} \qquad \rho = 1 - \frac{6.291304}{2.097.000}$$

$$= 1 - \frac{1791822}{2097000} \qquad = 1 - \frac{1953666}{2097000} \qquad = 1 - \frac{1747824}{2097000}$$

log 1791822 = 6.2534	log 1953666 = 6.2909	log 1747824 = 6.2425
log 2.097.000 = 6.3216	log 2.097000 = 6.3216	log 2.097000 = 6.3216.
log quotient = $\overline{1}.9318$	log quotient = $\overline{1}.9693$	log quotient = $\overline{1}.9209$

$$\rho = 1 - .8547 \qquad \rho = 1 - .9317 \qquad \rho = 1 - .8335.$$

$$\rho = .15 \qquad \rho = .07 \qquad \rho = .17.$$

$$r = .16 \pm .06 \qquad r = .07 \pm .06 \qquad r = .18 \pm .06$$

INTELLIGENCE AND Pencil	INTELLIGENCE AND Colour	INTELLIGENCE AND Memory

INTER-CORRELATION OF ART TESTS (1•2 groups and 3.4.5.) WITH "INTELLIGENCE"

	INTELLIGENCE AND ART TESTS (AVh) No 1•2		INTELLIGENCE AND ART TESTS (3.4.5) No. 3.4.5.	
	d	d^2	d	d^2
ALLAN A	36	1296.	24.5	600.25
	28.5	812.25	35	12.25
	38.5	1482.25	29.5	870.25
	45.5	2070.25	51.5	2652.25
	51	2601.	36.5	1332.25
	20	400.	16	256.
	47.5	2256.25	40	1600.
	2	4.	56.5	3192.25
	6	36.	63	3969.
	63.5	4032.25	1	1.
	43.5	1892.25	15.5	240.25
	23	529.	62	3844.
	48	2304.	12.5	156.25
	41	1681.	44	1936.
	30	900.	10.5	110.25
	54	2916.	51.5	2652.25
	54.5	2970.25	57.5	3306.25
	49	2401.	46.5	2162.25
	32.5	1056.25	8	64.
	4.5	20.25	77.5	6006.25
	5	.25	81	6561.
	17.5	306.25	74	5476.
	0	0.	42	1764.
	40	1600.	88.5	7832.25
	27.5	756.25	24.5	600.25
	32.5	1056.25	41.5	1722.25
	26	676.	8.5	72.25
FISHER A	9	81.	14.5	210.25
	23.5	552.25	9	81.
	14.5	210.25	17.5	306.25
	37	1369.	0	0.
	12.5	156.25	53	2809.
	34.5	1190.25	91.5	8372.25
	4	16.	.5	.25
	36.5	1332.25	12	144.
	88	7744.	24.5	600.25
	5.5	30.25	28.5	812.25
	30.5	930.25	35.5	1260.25
	53.5	2862.25	21	441.
	7.5	56.25	41	1681.
	35.5	1260.25	60.5	3660.25
	9	81.	60	3600.
	53	2809.	78	6084.
	34	1156.	23.5	552.25
	13.5	182.25	3	9.
	38.5	1482.25	93.5	8742.25
	49	2401.	47	2209.
	53	2809.	30	900.
	62.5	3906.25	26.5	702.25
	52.5	2756.25	2	4.
	48	2304.	4	16.
	51	2601.	33	1089.
	30.5	930.25	58	3364.
INNES R	33.5	1122.25	29.5	870.25
	1	1.	12.5	156.25
	8.5	72.25	28.5	812.25
	2.5	6.25	21	441.
	4	16.	30.5	930.25
	2	4.	16.5	272.25
	33.5	1122.25	10	100.
	69	4761.	32.5	1056.25
	22.5	506.25	82.5	6806.25
	12	144.	4.5	20.25
	21.5	462.25	29	841.
	15	225.	62.5	3906.25
	17.5	306.25	76	5776.
	38.5	1482.25	47.5	2256.25
	5.5	30.25	34	1156.
	90	8100.	76.5	5852.25
	28	784.	89	7921.
	48.5	2352.25	33	1089.
	18.5	342.25	26.5	650.25
	88.5	7310.25	22	484.
	24.5	600.25	64	4096.
NEIL T	26.5	702.25	2	4.

INTER-CORRELATION OF ART TESTS (1 and 2 average AND 3.4.5) WITH "INTELLIGENCE"

	INTELLIGENCE AND ART TESTS (Av. 1+2) A₀ 1+2		INTELLIGENCE AND ART TESTS (3.4.5) A₀ 3.4.5	
	d	d^2	d	d^2
NICHOLSON H	77.5	60 06.25	6.5	42.25
	42	17 64.	24	576.
	1.5	2.25	1.5	.25
	20	400.	32.5	10 56.25
	45.5	20 70.25	27.5	7 56.25
	60	36 00.	34	11 56.
	16	256.	48.5	23 52.25
	31.5	9 92.25	6.5	42.25
	47.5	22 56.25	6.5	42.25
	15.5	240.25	83.5	69 72.25
	14	196.	19	361.
	42.5	18 06.25	32	10 24.
	13.5	182.25	49	24 01.
	0	0.	75.5	57 00.25
	62	38 44.	3.5	12.25
	27.5	7 56.25	21	441.
	59.5	35 40.25	40	16 00.
	55	30 25.	65.5	42 90.25
ROBSON J	17.5	306.25	36	12 96.
	49	24 01.	35.5	12 60.25
	14	196.	17	289.
	2.5	6.25	35.5	12 60.25
	4	16.	46	21 16.
	55	30 25.	86	73 96.
	29	841.	10.5	110.25
	5.5	30.25	19	361.
	69.5	48 30.25	37.5	14 06.25
	15.5	240.25	46.5	21 62.25
	22	4 84.	88.5	78 32.25
	100.5	101 00.25	68	46 24.
	85	72 25.	37	13 69.
	5.5	30.25	55.5	30 80.25
	78	60 84.	95.5	91 20.25
STEPHENSON A	23	5 29.	67	44 89.
	55	30 25.	110	121 00.
	32.5	10 56.25	43	18 49.
	39	15 21.	27.5	7 56.25
	10	100.	28.5	8 12.25
	45	20 25.	10.5	110.25
	26	6 76.	43	18 49.
	2.5	6.25	33	10 89.
	15	225.	20.5	4 20.25
	103	106 09.	104	108 16.
	8	64.	51.5	26 52.25
	10	100.	10.5	110.25
	14	1 96.	38.5	14 82.25
	42.5	18 06.25	24	576.
	54.5	29 70.25	58.5	34 22.25
	7.5	56.25	14.5	210.25
	89	79 21.	86.5	75 82.25
	6	36.	20	400.
	102.5	105 06.25	106.5	113 42.25
YARDLEY R.	5.5	30.25	37.5	14 06.25

Σd^2:   217,928.5   288,121.5

$$\rho = 1 - \frac{6.217929}{2.097000} \qquad\qquad \rho = 1 - \frac{6.288122}{2.097000}$$

$$= 1 - \frac{1307574}{2.097000} \qquad\qquad = 1 - \frac{1728732}{2.097000}$$

$$\log 1307574 = 6.1165 \qquad\qquad \log 1728732 = 6.2378$$
$$\log 2097000 = 6.3216 \qquad\qquad \log 2097000 = 6.3216$$
$$\log \text{quotient} = \bar{1}.7949 \qquad\qquad \log \text{quotient} = \bar{1}.9162$$

$$\rho = 1 - .6236 \qquad\qquad \rho = 1 - .8245$$

$$\rho = .38 \qquad\qquad\qquad \rho = .18.$$

$$r = .40 \pm .05 \qquad\qquad r = .19 \pm .06$$

	I	D_s	d	d^2	A_o	d	d^2	D_s+A_o / A_c	d	d^2
ALLAN. A.	87	31	56	31 36	85.5	1.5	2.25	54	33	10 89
	15	98	83	68 89	14	1	1	56	41	16 81
	82	111	29	8 41	81.5	.5	.25	102	20	4 00
	41	102	63	39 69	97	56	31 36	102	61	37 21
	67	114.5	47.5	22 56.25	118.5	51.5	26 52.25	120	53	28 09
	27.5	110	82.5	68 06.25	5	22.5	5 06.25	51.5	24	5 76
	67	58.5	8.5	72.25	14	53	28 09	34.5	32.5	10 56.25
	60	62	2	4	97	37	13 69	80.5	20.5	4 20.25
	29.5	93	63.5	40 32.25	63.5	34	11 56	86	56.5	31 92.25
	4.5	40.5	36	12 96	14	9.5	90.25	27	22.5	5 06.25
	34.5	112.5	78	60 84	42	7.5	56.25	88	53.5	28 62.25
	6	16	10	100	42	36	12 96	23.5	17.5	306.25
	80	119.5	39.5	15 60.25	124	44	19 36	124	44	19 36
	71	128	57	32 49	85.5	14.5	2 10.25	118.5	47.5	22 56.25
	64.5	108	43.5	18 92.25	78	14.5	2 10.25	97.5	33	10 89
	89.5	5.5	84	70 56	35.5	54	29 16	10	79.5	63 20.25
	23.5	17.5	6	36	81.5	58	33 64	40.5	17	289
	84.5	20	64.5	41 60.25	35.5	49	24 01	21.5	63	39 69
	11	23	12	144	25	14	196	19	8	64
CROUDACE. J.	39	117.5	78.5	61 62.25	89.5	50.5	25 50.25	105	66	43 56
	100	18.5	21.5	462.25	58	42	17 64	78.5	24.5	6 00.25
	112	52	60	36 00	70	42	17 64	59	53	28 09
	12	58.5	46.5	21 62.25	25	13	169	37.5	25.5	6 50.25
	38	100	62	38 44	115	77	59 24	112	74	54 76
	56.5	89	32.5	10 56.25	48.5	8	64	75.5	19	361
	62	124	62	38 44	102.5	40.5	16 40.25	116	54	29 16
	45.5	57	11.5	1 32.25	32.5	13	169	40.5	5	25
	23.5	77	53.5	28 62.25	19	4.5	20.25	98	24.5	6 00.25
	94.5	95	.5	.25	118.5	24	576	110	15.5	240.25
	36.5	60.5	24	5 76	45.5	9	81	48	11.5	1 32.25
	81	107	26	6 76	111	30	900	110	29	8 41
	107	104.5	2.5	6.25	78	29	8 41	97.5	9.5	90.25
	1	49	48	23 04	63.5	62.5	39 06.25	93	92	84 64
	126	126	0	0	127	1	1	128	2	4
	7	76	69	47 61	25	18	3 24	51.5	44.5	19 80.25
	117	9	108	116 64	58	59	34 81	19	98	96 04
	9.5	30	20.5	4 20.25	7	2.5	6.25	13	4.5	20.25
	104	10	94	88 36	70	34	11 56	25	79	62 41
	33	24	9	81	74.5	41.5	17 22.25	44.5	11.5	132.25
HALL. R.	87	104.5	17.5	3 06.25	125	38	14 44	124	37	13 69
	8	25	17	2 89	48.5	40.5	16 40.25	34.5	26.5	7 02.25
	67	34	33	10 89	14	53	28 09	19	48	23 04
	116	12	104	108 16	45.5	70.5	49 70.25	17	99	98 01
	92	71.5	20.5	4 20.25	58	34	11 56	71.5	20.5	4 20.25
	22	28	6	36	19	3	9	21.5	.5	.25
	29.5	103	73.5	54 02.25	108	78.5	61 62.25	108	78.5	61 62.25
	45.5	98	52.5	27 56.25	99.5	54	29 16	99.5	54	29 16
	111	69	42	17 64	66.5	44.5	19 80.25	71.5	39.5	15 60.25
	77	53.5	23.5	5 52.25	52	25	6 25	48	29	8 41
	52	106	54	29 16	89.5	31.5	14 06.25	102	50	25 00
	58	19	39	15 21	19	39	15 21	115	57	32 49
	52	14.5	37.5	14 06.25	2	50	25 00	3	49	24 01
	77	32.5	44.5	19 80.25	70	7	49	48	29	8 41
INNES. R.	36.5	32.5	4	16	3	53.5	11 22.25	6	30.5	9 30.25
	25.5	36	10.5	1 10.25	30	4.5	20.25	29.5	4	16
	109.5	127	17.5	3 06.25	111	1.5	2.25	126	16.5	272.25
	17	53.5	36.5	13 32.25	19	2	4	32.5	15.5	240.25
	123	117.5	5.5	30.25	123	0	0	124.5	1.5	2.25
	120	101	19	361	113.5	1.5	2.25	114	6	36
	91	98	7	49	114	23	5 29	106.5	15.5	240.25
	79	114.5	35.5	12 60.25	52	27	729	93	14	196
	21	26	5	25	74.5	53.5	28 62.25	44.5	23.5	5 52.25
	31.5	37	5.5	30.25	14	17.5	3 06.25	23.5	8	64
	83	40.5	42.5	18 06.25	89.5	6.5	42.25	67.5	15.5	240.25
	89.5	123	33.5	11 22.25	74.5	15	225	104	14.5	210.25
	27.5	21.5	6	36	45.5	18	3 24	29.5	2	4
	69	96	27	729	113.5	44.5	24 80.25	110	41	16 81
	45.5	17.5	38	14 44	19	26.5	7 02.25	11.5	34	11 56
	114.5	55.5	59	34 81	30	84.5	71 40.25	39	78.5	57 00.25
	96	45	51	26 01	25	71	50 41	31	65	42 25
	52	55.5	3.5	12.25	58	6	36	56	4	16
	43	11	32	10 24	40	3	9	14.5	28.5	8 12.25
	114.5	87	27.5	7 56.25	58	56.5	31 92.25	80.5	34	11 56
	4.5	82	77.5	60 06.25	42	31.5	14 06.25	71.5	67	44 89
NEIL. T.	17	91.5	74.5	55 50.25	25	8	64	62.5	45.5	20 70.25

INTER·CORRELATION OF "INTELLIGENCE" WITH Ds, Ao AND Ac

	I	Ds	d	d²	Ao	d	d²	Ds+Ao / Ac	d	d²
NICHOLSON W	31.5	67.5	36	12 96	89.5	58	33 64	83.5	52	27 04
	105	51	54	29 16	70	35	12 25	59	46	21 16
	127.5	78.5	49	24 01	128	.5	.25	124	3.5	12 25
	71	60.5	10.5	110.25	78	7	49	69	2	4
	41	46.5	5.5	30.25	81.5	40.5	16 40.25	62.5	21.5	462.25
	34.5	73.5	39	15 21	85.5	51	26 01	86	51.5	26 52.25
	102.5	50	52.5	27 56.25	74.5	28	7 84	62.5	40	16 00
	118	65	53	28 69	104	14	196	90	28	784
	62	40.5	21.5	462.25	35.5	26.5	702.25	36	26	676
	20	75	55	30 25	70	50	25 00	78.5	58.5	34 22.25
	49.5	7.5	32	1764	45.5	4	16	14.5	35	12 25
	124.5	85	39.5	15 60.25	93.5	31	9 61	93	31.5	9 92.25
	87	84	3	9	52	35	12 25	78.5	8.5	72.25
	94.5	94	.5	.25	52	44.5	19 80.25	82	12.5	156.25
	120	43.5	76.5	58 52.25	97	23	5 29	71.5	48.5	23 52.25
	59	89	30	9 00	66.5	7.5	56.25	83.5	24.5	600.25
ROBERTSON R	14	2	12	144	63.5	49.5	24 50.25	7.5	6.5	42.25
	3	48	45	20 25	58	55	30 25	51.5	48.5	23 52.25
	2	86	84	70 56	25	23	5 29	56	54	29 16
	45.5	3	42.5	18 06.25	93.5	48	23 04	25	20.5	4 20.25
	98	116	18	3 24	106.5	8.5	72.25	114	16	256
	84.5	71.5	13	169	111	26.5	702.25	99.5	15	225
	74	28	46	21 16	108	34	11 56	75.5	1.5	2.25
	113	67.5	45.5	20 70.25	38.5	74.5	55 50.25	51.5	51.5	26 52.25
	93	121.5	28.5	8 12.25	122	29	8 41	121.5	27.5	8 12.25
	100	67	33	10 89	93.5	6.5	42.25	86	14	196
	55	109	54	29 16	118.5	63.5	40 32.25	118.5	63.5	40 32.25
	127.5	119.5	8	64	105.5	22	4 84	104	13.5	182.25
	100	89	11	121	38.5	61.5	37 82.25	67.5	32.5	10 56.25
	106	5.5	100.5	1 01 00.25	8.5	97.5	95 06.25	4	102	1 04 04
	17	91.5	74.5	55 50.25	85.5	78.5	61 62.25	93	76	57 76
	109.5	80.5	29	8 41	101	8.5	72.25	96	13.5	182.25
	102.5	21.5	81	65 61	6	96.5	93 12.25	7.5	95	90 25.25
	74	73.5	.5	.25	11	63	39 69	42.5	31.5	9 92.25
THOMAS G	13	121.5	108.5	1 17 72.25	108	95	90 25	117	104	1 08 16
	49.5	83	33.5	11 22.25	93.5	44	19 36	93	43.5	18 92.25
	4	1	40	16 00	8.5	32.5	10 56.25	1	40	16 00
	9.5	35	25.5	6 50.25	25	15.5	2 40.25	16	6.5	42.25
	64.5	40.5	20	400	32.5	32	10 24	37.5	27	729
	77	28	49	24 01	99.5	22.5	5 06.25	67.5	9.5	90.25
	71	70	1	1	52	19	361	59	12	144
	48	63.5	15.5	240.25	63.5	15.5	240.25	67.5	29.5	8 70.25
	19	125	106	1 12 36	126	107	1 14 49	127	108	1 16 64
	120	112.5	7.5	56.25	102.5	17.5	306.25	106.5	13.5	182.25
	122	43.5	78.5	61 62.25	118.5	3.5	12.25	89	33	10 89
	54	4	50	25 00	81.5	27.5	7 56.25	27	27	729
	25.5	7.5	18	324	10	15.5	2 40.25	5	20.5	4 20.25
	62	46.5	15.5	240.25	4	58	33 64	9	53	28 09
	97	13	84	70 56	113	16	256	62.5	34.5	11 90.25
	124.5	38	86.5	75 82.25	35.5	89	79 21	32.5	92	84 64
	74	80.5	6.5	42.25	58	16	256	75.5	1.5	2.25
	108	14.5	93.5	87 42.25	1	107	1 14 49	2	106	1 12 36
YARDLEY R	56.5	63.5	7	49	30	26.5	7 02.25	42.5	14	196

| Σd² | | 299,733.5 | | | 229,694 | | | 254,985.25 | | |

$$\rho = 1 - \frac{6.299734}{2,097,000}$$
$$= 1 - \frac{1798404}{2,097,000}$$

log 1798404 = 6.2544
log 2097000 = 6.3216
log quotient = $\bar{1}.9333$

$$\rho = 1 - .8576$$
$$\rho = .14$$
$$r = .15 \pm .06$$

$$\rho = 1 - \frac{6.229694}{2,097,000}$$
$$= 1 - \frac{1378164}{2,097,000}$$

log 1378164 = 6.1392
log 2097000 = 6.3216
log quotient = $\bar{1}.8176$

$$\rho = 1 - .6570$$
$$\rho = .34 \qquad r = .35 \pm .05$$

$$\rho = 1 - \frac{6.254985}{2,097,000}$$
$$= 1 - \frac{1529910}{2,097,000}$$

log 1529910 = 6.1847
log 2097000 = 6.3216
log quotient = $\bar{1}.8631$

$$\rho = 1 - .7297$$
$$\rho = .27 \qquad r = .28 \pm .06$$

Ds WITH "g"

ALSO BY SPEARMAN'S FORMULA FOR CORRELATION OF SUMS.

SINCE

$r_{Ac.g} = .40$
$r_{Ds.g} = .19$
$r_{DsAo} = .33$

$$r_{Ao.g} = \frac{.40 + .19}{\sqrt{2(1+.33)}} = .36$$

Ao WITH "g"

ALSO SINCE.

$r_{Ds.g} = .15$
$r_{Ao.g} = .35$
$r_{DsAo} = .54$

Ac with "g"

$$r_{Ac.g} = \frac{.15 + .35}{\sqrt{2(1+.54)}} = .28 \text{ BY SPEARMAN'S FORMULA}$$

THE DIFFERENCE BETWEEN THIS AND THE VALUE GIVEN ABOVE (.35) IS PROBABLY CAUSED BY THE FORMULA APPLYING FOR CASES WHERE THE STANDARD DEVIATION OF THE MARKS IS THE SAME AND NOT THE RANGE SIMPLY.

CONVERSION OF ρ ΤΟ r AND CALCULATION OF PROBABLE ERRORS

1. CONVERSIONS FROM ρ TO r WERE EFFECTED BY MEANS OF THE TABLE GIVEN BY K. PEARSON, F.R.S. IN DRAPERS Co. RESEARCH MEMOIRS. BIOMETRIC SERIES IV. 1907. P.18.

2. PROBABLE ERRORS WERE CALCULATED FROM $P.E = \cdot 67449 \cdot \dfrac{1-r^2}{\sqrt{N}}$

Now. $\log \cdot 67449 = \bar{1} \cdot 6290.$
$\log 128 = 2 \cdot 1072.$
$\log \sqrt{128} = 1 \cdot 0536.$
$\log \dfrac{\cdot 67449}{\sqrt{128}} = \bar{2} \cdot 7754.$

$\therefore \dfrac{\cdot 67449}{\sqrt{128}} = \cdot 060.$ $\therefore P.E = (1-r^2) \times \cdot 06.$

ρ	r	$1-r^2$	PROB. ERROR
·82	·83	$1 - \cdot 6889 = \cdot 3111$	·02
·80	·81		·02
·78	·79		·02
·77	·78		·02
·75	·77	$1 - \cdot 5929 = \cdot 4071$	·02
·74	·76	$1 - \cdot 5776 = \cdot 4224$	·03
·72	·74		·03
·69	·71		·03
·63	·65	$1 - \cdot 4225 = \cdot 5775$	·03
·62	·64	$1 - \cdot 4096 = \cdot 5904$	·04
·59	·61		·04
·57	·59		·04
·55	·57		·04
·54	·56		·04
·53	·55		·04
·52	·54		·04
·51	·53		·04
·50	·52	$1 - \cdot 2704 = \cdot 7296$	·04
·46	·48	$1 - \cdot 2304 = \cdot 7696$	·05
·38	·40		·05
·32	·33		·05
·28	·29	$1 - \cdot 0841 = \cdot 9159$	·05
·27	·28	$1 - \cdot 0784 = \cdot 9216$	·06
·18	·19		·06
·17	·18		·06
·15	·16		·06
·14	·15		·06
·07	·07	$1 - \cdot 0049 = \cdot 9951$	·06

N=128
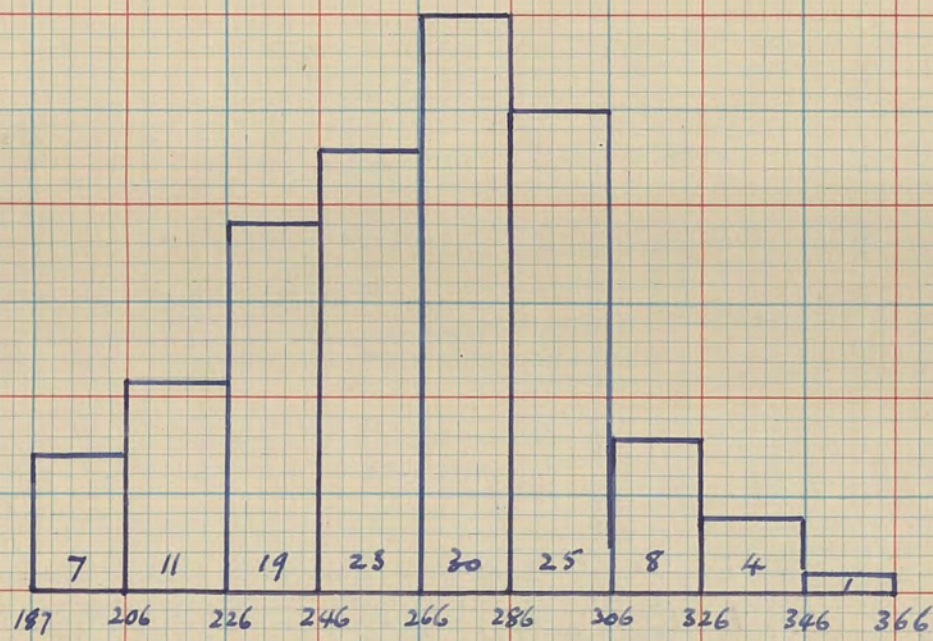
DISTRIBUTION OF MARKS

GAINED IN THE

INTELLIGENCE TESTS

LIST I

| 7 | 11 | 19 | 23 | 30 | 25 | 8 | 4 | |
187 206 226 246 266 286 306 326 346 366
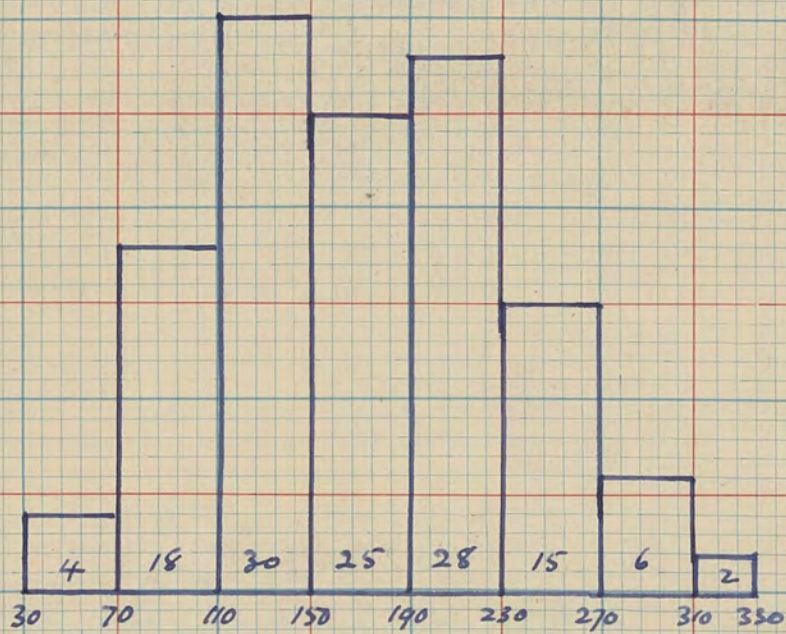
N=128

DISTRIBUTION OF MARKS

GAINED IN THE

DRAWING TESTS

LIST D₅

| 4 | 18 | 30 | 25 | 28 | 15 | 6 | 2 |
30 70 110 150 190 230 270 310 350

N=128
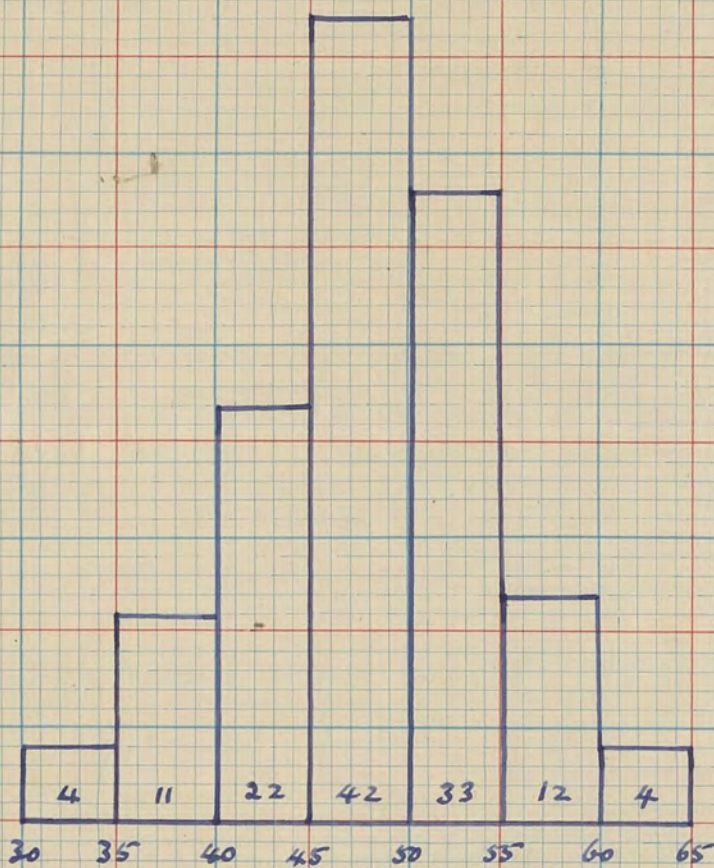
DISTRIBUTION OF MARKS

GAINED IN THE

ART TESTS

LIST A₀

| 4 | 11 | 22 | 42 | 33 | 12 | 4 |
30 35 40 45 50 55 60 65

THESE GRAPHS ARE INTRODUCED HERE SIMPLY TO SHOW THE APPROXIMATELY
NORMAL DISTRIBUTION OF THE MARKS. FOR CORRELATION PURPOSES RANKS ONLY
WERE EMPLOYED, AS PREVIOUSLY STATED.

XXX.

Drawing Test
Number 1

PENCIL DRAWING.

THESE TWO EXTREME
EXAMPLES SHOW THE
WIDE RANGE OF
ABILITY REVEALED
BY THE TESTEES.

THIS DRAWING WAS PLACED IN THE FOLLOWING
POSITIONS BY THE FOUR MARKERS

2nd . 6th . 1.5^{th} . 5th

ONE OF THE BEST DRAWINGS   IN 128 DRAWINGS

ONE OF THE WORST DRAWINGS.

THIS DRAWING WAS PLACED IN THE
FOLLOWING POSITIONS BY THE FOUR
MARKERS.

127th . 127th . 126.5^{th} . 126th

IN 128 DRAWINGS

XXXI

THIS DRAWING WAS PLACED IN THE
FOLLOWING POSITIONS BY THE FOUR
MARKERS
4·5ᵗʰ . 1ˢᵗ . 3·8ᵗʰ . 5ᵗʰ

IN 128 DRAWINGS

DRAWING TEST NUMBER 2.   WATER COLOUR DRAWINGS. ———   SHOWING THE WIDE RANGE OF ABILITY

THIS DRAWING WAS PLACED IN
THE FOLLOWING POSITIONS BY
THE FOUR MARKERS

125ᵗʰ . 107·5ᵗʰ . 125·5ᵗʰ . 126ᵗʰ

IN 128 DRAWINGS.

XXXII

THIS DRAWING WAS
PLACED IN THE
FOLLOWING POSITIONS
BY THE FOUR MARKERS

2nd. 1st. 18th. 17th

IN 128 DRAWINGS

ONE OF THE BEST DRAWINGS
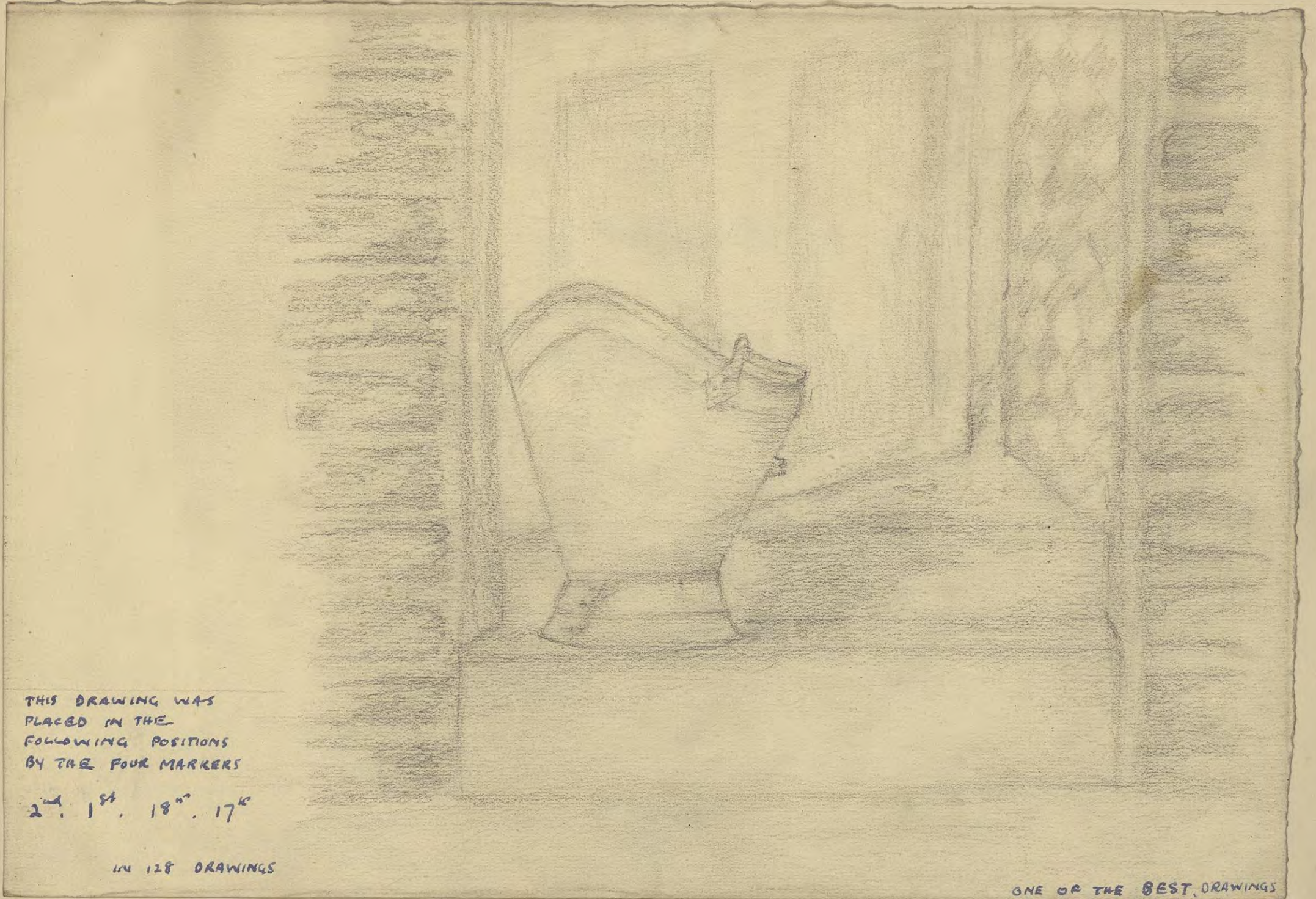
DRAWING TEST NUMBER 3   MEMORY DRAWINGS —— SHOWING A VERY WIDE RANGE OF ABILITY

ONE OF THE WORST DRAWINGS

THIS DRAWING WAS PLACED IN THE
FOLLOWING POSITIONS BY THE FOUR
MARKERS

128th. 127th. 122.5th. 125th

IN 128 DRAWINGS.

XXXIII
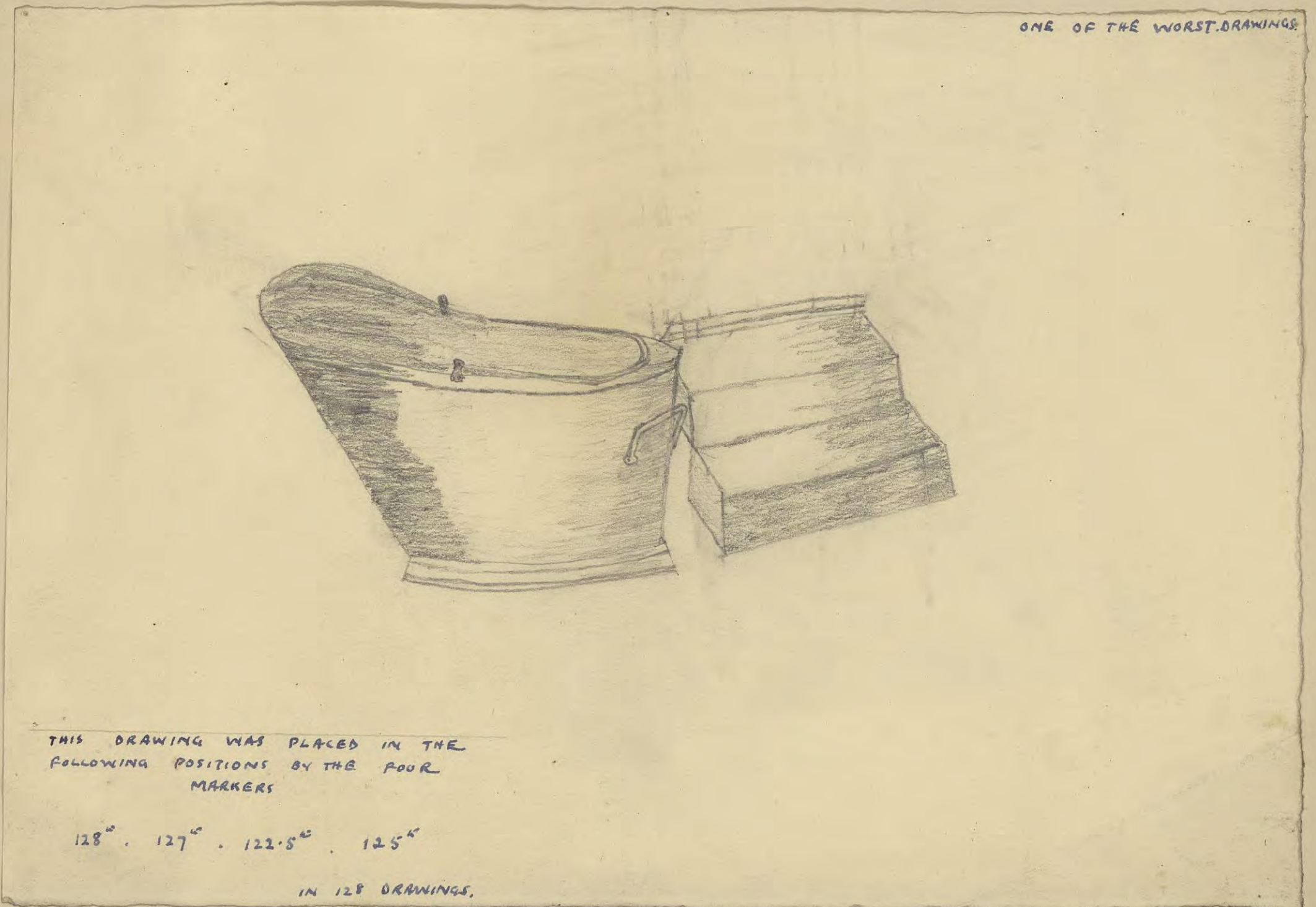
Name	S	I	D_s	d	d^2	d	d^2	
ALLAN A	72	87	31	15	225·	41	1681·	
	44	15	98	29	841·	54	2916·	
	35	82	111	47	2209·	76	5776·	
	78	41	102	37	1369·	24	576·	
	79	67	114·5	22	484·	35·5	1260·25	
	45	27·5	110	17·5	306·25	65	4225·	
	12	67	58·5	55	3025·	46·5	2162·25	
	62	60	62	2	4·	0	0·	
	20	29·5	93	9·5	90·25	73	5329·	
	22	4·5	40·5	17·5	306·25	18·5	342·25	
	34	34·5	112·5	·5	·25	78·5	6162·25	
	29	6	16	23	529·	13	169·	
	85	80	119·5	5	25·	34·5	1190·25	
	121	71	128	50	2500·	7	49·	CORRELATIONS
	87	64·5	108	22·5	506·25	21	441·	
	30	89·5	5·5	59·5	3540·25	24·5	600·25	BETWEEN
	55	23·5	17·5	31·5	992·25	37·5	1406·25	
	18	84·5	20	66·5	4422·25	2	4·	SCHOLASTIC ABILITY (S)
CURRY G	1	11	23	10	100·	22	484·	
	77	39	117·5	38	1444·	40·5	1640·25	INTELLIGENCE (I)
	93	100	78·5	7	49·	14·5	210·25	
	112	112	52	0	0·	60	3600·	AND·
	14	12	58·5	2	4·	44·5	1980·25	
	32	38	100	6	36·	68	4624·	ARTISTIC ABILITY (D_S) (DRAWING)
	108	56·5	89	51·5	2652·25	19	361·	
	109	62	124	47	2209·	15	225·	
	81	45·5	57	35·5	1260·25	24	576·	
	67	23·5	77	43·5	1892·25	10	100·	
	98	94·5	95	3·5	12·25	3	9·	
	17	36·5	60·5	19·5	380·25	43·5	1892·25	
	50	81	107	31	961·	57	3249·	
FROST J	100	107	104·5	7	49·	4·5	20·25	
	43	1	49	42	1764·	6	36·	
	127	126	126	1	1·	1	1·	
	57	7	76	50	2500·	19	361·	
	94	117	9	23	529·	85	7225·	
	60	9·5	30	49·5	2450·25	30	900·	
	96	104	10	8	64·	86	7396·	
	59	33	24	26	676·	35	1225·	
	80	87	104·5	7	49·	24·5	600·25	
	74	8	25	66	4356·	49	2401·	
	65	67	34	2	4·	31	961·	
	82	116	12	34	1156·	70	4900·	
	84	92	71·5	8	64·	12·5	156·25	
	70	22	28	48	2304·	42	1764·	
	5	29·5	103	24·5	600·25	98	9604·	
	38	45·5	98	7·5	56·25	60	3600·	
HOWE R	122	111	69	11	121·	53	2809·	
	46	77	53·5	31	961·	7·5	56·25	
	101	52	106	49	2401·	5	25·	
	39	58	19	19	361·	20	400·	
	3	52	14·5	49	2401·	11·5	132·25	
	16	77	32·5	61	3721·	16·5	272·25	
	28	36·5	32·5	8·5	72·25	4·5	20·25	
	52	25·5	36	26·5	702·25	16	256·	
	75	109·5	127	34·5	1190·25	52	2704·	
	27	17	53·5	10	100·	26·5	7023·25	
	125	123	117·5	2	4·	7·5	56·25	
	123	120	101	3	9·	22	484·	
	88	91	98	3	9·	10	100·	
LANE B	105	79	114·5	26	676·	9·5	90·25	
	89	21	26	68	4624·	63	3969·	
	8	31·5	37	23·5	552·25	29	841·	
	21	83	40·5	62	3844·	19·5	380·25	
	68	89·5	123	21·5	462·25	55	3025·	
	13	27·5	21·5	14·5	210·25	8·5	72·25	
	90	69	96	21	441·	6	36·	
	49	45·5	17·5	3·5	12·25	31·5	992·25	
	4	114·5	55·5	110·5	12210·25	51·5	2652·25	
	86	96	45	10	100·	41	1681·	
	15	52	55·5	37	1369·	40·5	1640·25	
	6	43	11	37	1369·	5	25·	
	110	114·5	87	4·5	20·25	23	529·	
	9	4·5	82	4·5	20·25	73	5329·	
NEIL T	2	17	91·5	15	225·	89·5	8010·25	

	S	I	D_s	d	d^2		d	d^2
NICHOLSON. W.	36	31.5	67.5	5.5	30.25		31.5	992.25
	107	105	51	2	4		56	3136
	120	127.5	78.5	7.5	56.25		41.5	1722.25
	56	71	60.5	15	225		4.5	20.25
	19	41	46.5	22	484		27.5	756.25
	47	34.5	73.5	12.5	156.25		26.5	702.25
	95	102.5	50	7.5	56.25		4.5	20.25
	104	118	65	14	196		39	1521
	37	62	40.5	25	625		3.5	12.25
	51	20	75	31	961		24	576
	48	49.5	7.5	1.5	2.25		40.5	1640.25
	97	124.5	85	27.5	756.25		12	144
	73	87	84	14	196		11	121
	119	94.5	94	24.5	600.25		25	625
REED. B.	124	120	43.5	4	16		80.5	6480.25
	99	59	89	40	1600		10	100
	11	14	2	3	9		9	81
	7	3	48	4	16		41	1681
	25	2	86	23	529		61	3721
	66	45.5	3	20.5	420.25		63	2969
	115	98	116	17	289		1	1
	83	84.5	71.5	1.5	2.25		11.5	132.25
	117	74	28	43	1849		89	7921
	116	113	67.5	3	9		48.5	2352.25
	106	93	121.5	13	169		15.5	240.25
	31	100	67	69	4761		36	1296
	26	55	109	29	841		83	6889
	114	127.5	119.5	13.5	182.25		5.5	30.25
	108	100	89	2	4		13	169
	76	106	55	30	900		70.5	4970.25
	69	17	91.5	52	2704		22.5	506.25
	111	109.5	80.5	1.5	2.25		30.5	930.25
SWAN. G.	103	108.5	21.5	.5	.25		81.5	6642.25
	91	74	73.5	17	289		17.5	306.25
	71	13	121.5	58	3364		50.5	2550.25
	41	49.5	83	8.5	72.25		42	1764
	63	41	1	22	484		62	3844
	42	9.5	35	32.5	1056.25		7	49
	92	64.5	40.5	27.5	756.25		51.5	2652.25
	33	77	28	44	1936		5	25
	24	71	70	47	2209		46	2116
	23	48	63.5	25	625		40.5	1640.25
	110	19	125	21	441		85	7225
	126	120	112.5	6	36		13.5	182.25
	128	122	43.5	6	36		84.5	7140.25
	10	54	4	44	1936		6	36
	54	25.5	7.5	28.5	812.25		46.5	2162.25
	58	62	46.5	4	16		11.5	132.25
	53	97	13	44	1936		40	1600
	118	124.5	38	6.5	42.25		80	6400
	113	74	80.5	39	1521		32.5	1056.25
	64	108	14.5	44	1936		49.5	2450.25
YARDLEY. R.	61	56.5	63.5	4.5	20.25		2.5	6.25
	Σd^2				125363			242,446.5

$$P = 1 - \frac{6.\,125,363.}{2,097,000.}$$

$$= 1 - \frac{752,178}{2,097,000.}$$

$\log 752,178 = 5.8763$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.5547$

$$P = 1 - .3587$$

$$P = .64$$

SCHOLASTIC —— INTELLIGENCE

$r = .66 \pm .03$

$$P = 1 - \frac{6.\,242,446.5}{2,097,000}$$

$$= 1 - \frac{1,454,679}{2,097,000}$$

$\log 1,454,679 = 6.1629$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.8413.$

$$P = 1 - .6939$$

$$P = .31$$

SCHOLASTIC —— DRAWING.

$r = .32 \pm .05$