INTELLIGENCE TEST LISTS

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

	AGE.	INTELLIGENCE TESTS						I	TESTS
	Y. M.	SPEARMAN MARK	ORDER.	OTIS MARK	ORDER	d.	d^2	TOTAL ORDER	
ALLAN A	14.4	121	62.5	131	102.5	40	16 00·	252 87	
ALLEN H	12.7	121	62.5	184	6.5	56	31 36·	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	213 29.5	
BRITTAN N	12.10.	145	3	183	8	5	25·	328 4.5	
BROWN P	13.2	125	50.5	164	33	17.5	306·25	289 34.5	
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·	268 645	
CLARK H	13.10	117	75.5	134	100	24.5	600·25	357 89.5	
COOK A	14.1	131	31.5	167	26	5.5	30·25	318 23.5	
COWAN R	13.3.	107	98.5	146	15	23.5	552·25	253 84.5	
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	120	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	273 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	219 116	
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 E	13.11	128	39	179	19	20	400·	270 52	
HYSLOP D	14.6	115	79.5	146	75	4.5	20·25	261 77	
INNES R	13.8	134	20	154	52	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	142	6	162	36.5	30.5	930·25	304 17	
KINGHORN W	13.6	93	115	109	124.5	9.5	90'25	209 123	
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	259 79	
LEACH A	13.6	143	4.5	187	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	257 83	
MANN I	13.6	110	89.	141	88	1	1·	251 89.5	
MALLABURN R	14.2	124	52.5	170	205	32	1024·	274 27.5	
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	253 45.5	
McCALLA A	13.4	148	2	173	17	15	225·	221 114.5	
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	13.7	141	7.5	137	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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PAGE I CONTD.

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

	AGE.	INTELLIGENCE TESTS					
	Y. M	SPEARMAN MARK ORDER	OTIS MARK ORDER	d	d^2	TOTAL ORDER	
NICHOLSON W	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	286	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	107 43	174 18	28	748·	301	20
RICHARDSON A. C	13.11	135 18	146 75	57	3249·	281	49·5
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
RANSON 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	871	59
ROBERTSON R	13.7	135 22·5	173 17	5·5	30·25	306	14
ROBERTSON A	13.3	137 14	193 2	12	144·	330	3
ROBSON J	13.1	137 14	208 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 W	13.8	115 79·5	138 95	15·5	240·25	253	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 W	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
WIGHTLAW 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 W	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	124 112	11·5	132·25	230	108
YARDLEY R	13.9	135 18.	141 88	70	4900·	276	56·5
AVERAGE AGE	13.8			Σd^2 98,008.			

STANDARD DEVIATION 5·2 MTHS.

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

N = 128.

Σd^2 = 98008.

DETERMINATION OF ρ.

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

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

$$= 1 - .2804$$

$$= .72$$ CORRELATION BETWEEN SPEARMAN AND OTIS LISTS.

r = ·74 ± ·03

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

NOTE. VALUES OF Σd^2 HERE, AND THROUGHOUT THIS INVESTIGATION, WERE CALCULATED, AND CHECKED, BY COMPTOMETER.

MARKS AND POSITIONS AWARDED FOR PENCIL DRAWINGS – DRAWING TEST NUMBER 1

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

PENCIL DRAWINGS	MR. BURNS		MR LOUGHTON			MR. FALLONS			MR. HERON		
	MARK	POS	MARK	POS	d	MARK	POS	d	MARK	POS	d
ALLAN A	20	25	10	75	50	25	13	12	144	29	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	19·6	380·25	5	123·5	2·5	6·25	15	96·5	24·5	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	14·5	210·25	22	22·5	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	15	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	85	14	51	44·25	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	5	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
	15	50	13	58	8	64	14	60·5	10·5	110·25	25	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
	5	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	43	6	36	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	12	64	34	1156	12	82·5	52·5	2756·25	28	47	17	289
	5	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	21·5	462·25	11	90·5	21·5	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
	11	79·5	6	101·5	22	484	7	117	37·5	1406·25	21	70·5	9	81
HOWE M	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	15	·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	12	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	111·5	11·5	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	3	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	36·5	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
NEIL T	12	72	8	80	8	64	9	109	37	1369	18	85	13	169

PAGE III CONTD.

DRAWING TEST NUMBER 1

PENCIL DRAWINGS (CONTD).		MR. BURNS MARK	POS	MR. LOUGHTON MARK	POS	d	d^2	MR. FALLONS MARK	POS	d.	d^2	MR. HERON MARK	POS	d	d^2
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	12	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	25	6·25	23	47	29·5	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	42·25	29	5	11·5	132·25
		8	94	7	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	28	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	28	13	58	33	1089·	10	100	75	5625·	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
	Σd^2						69,811·25				70,007·5				78,276·

$$\rho = 1 - \frac{6 \cdot 69811}{2{,}097{,}000} = 1 - \frac{418{,}866}{2{,}097{,}000}$$

$\log 418866 = 5 \cdot 6221$

$\log 2{,}097{,}000 = 6 \cdot 3216$

$\log \text{quotient} = \overline{1} \cdot 3005$

$\rho = 1 - \cdot 1997$

$\rho = \cdot 80$

$$\rho = 1 - \frac{6 \cdot 70008}{2{,}097{,}000} = 1 - \frac{420{,}048}{2{,}097{,}000}$$

$\log 420048 = 5 \cdot 6232$

$\log 2{,}097{,}000 = 6 \cdot 3216$

$\log \text{quotient} = \overline{1} \cdot 3016$

$\rho = 1 - \cdot 2003$

$\rho = \cdot 80$

$$\rho = 1 - \frac{6 \cdot 78{,}276}{2{,}097{,}000} = 1 - \frac{469{,}656}{2{,}097{,}000}$$

$\log 469{,}656 = 5 \cdot 6719$

$\log 2{,}097{,}000 = 6 \cdot 3216$

$\log \text{quotient} = \overline{1} \cdot 3503$

$\rho = 1 - \cdot 2241$

$\rho = \cdot 78$

$r = \cdot 81 \pm \cdot 02$ $\quad r = \cdot 81 \pm \cdot 02$ $\quad r = \cdot 79 \pm \cdot 02$

PENCIL DRAWINGS

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

PENCIL	LOUGHTON AND FALLOWS (L&F)		LOUGHTON AND HERON (L&H)		FALLOWS AND HERON (F&H)	
	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.
	35	1225.	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.
	9.5	90.25	34	1156.	24.5	600.25
	2.5	6.25	27	729.	29.5	870.25
	35	1225.	5.5	30.25	29.5	870.25
NEIL T.	29	841.	5.	25.	24	576.

V

PENCIL DRAWINGS

PENCIL.		L&F		L&H		F&H	
		d.	d^2	d	d^2	d	d^2
NICHOLSON. W.		9	81.	38.5	1482.25	29.5	870.25
		3	9.	45.5	2070.25	42.5	1806.25
		29	841.	1	1.	28	784.
		31.5	992.25	8.5	72.25	24	576.
		61.5	3782.25	6.5	42.25	68	4624.
		21	441.	54.5	2970.25	33.5	1122.25
		35	1225.	36	1296.	1	1.
		1.5	2.25	24	576.	22.5	506.25
		58.5	3422.25	1	1.	59.5	3540.25
		11	121.	8.5	72.25	2.5	6.25
		4.5	20.25	1	1.	3.5	12.25
		3	9.	34.5	1180.25	37.5	1406.25
		29.5	870.25	27.5	756.25	2	4.
		13	169.	15	225.	2	4
		5	25.	19.5	380.25	24.5	600.25
		1.5	2.25	6.5	42.25	8	64.
		9	81.	8	64.	1	1.
		10.5	110.25	5.5	30.25	5	25.
		25	625.	26	676.	1	1.
		2	4.	4.5	20.25	3.5	12.25
		22	484.	19.5	380.25	1.5	2.25
		34	1156.	33	1089.	1	1.
		13	169.	15	225.	28	784.
SCOTT. W.		13	169.	31	961.	18	324.
		1.5	2.25	7	49.	5.5	30.25
		7	49.	18.5	342.25	25.5	650.25
		9	81.	29.5	870.25	20.5	420.25
		15.5	240.25	19.5	380.25	4	16.
		12	144.	24	576.	36	1296.
		4	16.	1	1.	5	25.
		28	784.	29.5	870.25	1.5	2.25
		3	9.	22.5	506.25	25.5	650.25
		45	2025.	11	121.	34	1156.
		53.5	2862.25	1	1.	52.5	2756.25
		11	121.	83.5	6972.25	72.5	5256.25
		8.5	72.25	61	3721.	52.5	2756.25
		4.5	20.25	5	25.	9.5	90.25
TAIT. H.		7.5	56.25	17.5	306.25	10	100.
		4	16.	15	225.	19	361.
		30	900.	25	625.	5	25.
		53.5	2862.25	5	25.	48.5	2352.25
		5	25.	16	256.	11	121.
		1	1.	39.5	1560.25	38.5	1482.25
		35.5	1260.25	10	100.	25.5	650.25
		27	729.	49	2401.	22	484.
		19	361.	22	484.	3	9.
		13	169.	1	1.	12	144.
		10	100.	11	121.	1	1.
		39	1521.	34	1156.	5	25.
		36	1296.	59	3481.	23	529.
		21	441.	31	961.	10	100.
		42	1764.	27	729.	69	4761.
YARDLEY. R.		12	144.	7.5	56.25	4.5	20.25
	Σd^2		75,983.		79508.5		89559.

$$\rho = 1 - \frac{6 \cdot 75,983.}{2,097,000} = 1 - \frac{455,898}{2,097,000}$$

$\log 455898 = 5.6589$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.3373$

$\rho = 1 - .2174$

$\rho = .78$

$r = .79 \pm .02$

$$\rho = 1 - \frac{6 \cdot 79,509}{2,097,000} = 1 - \frac{477,054}{2,097,000}$$

$\log 477054 = 5.6785$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.3569$

$\rho = 1 - .2275$

$\rho = .77$

$r = .78 \pm .02$

$$\rho = 1 - \frac{6 \cdot 89,559}{2,097,000} = 1 - \frac{537354}{2,097,000}$$

$\log 537354 = 5.7303$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.4087.$

$\rho = 1 - .2563$

$\rho = .74.$

$r = .76 \pm .03$

MARKS AND POSITIONS AWARDED FOR WATER COLOUR DRAWINGS —— DRAWING TEST NUMBER 2

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	d^2	Mark. Pos	d	d^2	Mark. Pos	d	d^2
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 54	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 1095	8	64.	8 106.5	5	25.
	22 13.5	26 7.5	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	13	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 35.5	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 11.5	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 83	5	25.
	13 45	4 101	56	3136.	14 48	3	9.	12 75	30	900.
	11 54	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	17 355	9.5	90.25
	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	25	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 54	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 5	45.5	2070.25
	17 25.5	24 2.5	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	14 23	3	9.
	20 18	5 95	77	5929.	11 61.5	43.5	1892.25	19 23	5	25.
	15 34.5	18 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 36.5	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.	25 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.	4 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	26.5	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	9 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	27	729.
	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	3 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

PAGE VII CONTD.

DRAWING TEST NUMBER 2

COLOUR DRAWINGS		MR. BURNS MARK	POS.	MR. LOUGHTON MARK	POS	d	d^2	MR FALLOWS MARK	POS	d	d^2	MR HERON MARK	POS	d	d^2
NICHOLSON H		11	57	14	37	20	400.	11	61.5	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	41	33.5	11 22.25	12	75	29.5	870.25
		12	50.5	6	87.5	37	1369.	12	65.5	5	25.	17	35.5	15.0	225.
		27	6.5	13	43	36.5	1332.25	10	41	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	75	40.5	1840.25
		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	1640.25	30	1.5	1	1.	29	2	.5	.25
		2	119	8	75.5	43.5	1892.25	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	2450.25	9	83.5	41.5	1722.25	9	97.5	27.5	756.25
		11	57	26	7.5	49.5	2450.25	16	37	20	400.	14	61	4	16.
		8	83	12	48.5	24.5	1190.25	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	2070.25
		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	1681.	16	37	2.5	6.25	26	3	31.5	992.25
		10	64.5	19	25.5	39	1521.	22	24	40.5	1640.25	11	85.5	21	441.
SCOTT H		9	73	21	20	53	2809.	26	12.5	60.5	3660.25	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	1190.25	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	3660.25	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	306.25
		11	57	21	20	37	1369.	15	43.5	13.5	182.25	23	9.5	47.5	2256.25
		2	119	18	28	91	8281.	9	83.5	35.5	1260.25	17	35.5	83.5	6972.25
		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	2256.25	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	1640.25	7	103	20	400.	5	120	37	1369.
		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	1560.25
		10	64.5	1	123.5	59	3481.	8	94.5	30	900.	12	75	10.5	110.25
		3	110.5	8	75.5	35	1225.	8	94.5	16	256.	12	75	35.5	1260.25
		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	1369.	9	83.5	33	1089.	11	85.5	35	1225.
		25	9.5	22	16.5	7	49.	22	24	14.5	210.25	16	43.5	34	1156.
		10	64.5	9	68	3.5	12.25	8	94.5	30	900.	9	97.5	33	1089.
		2	119	13	43	76	5776.	10	71	48	2304.	14	61	58	3364.
		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
											64518.75				76,925.5
	Σd^2						127,847.				645~~18~~.75				76,9~~25~~6

$$\rho = 1 - \frac{6.127,847}{2,097,000} = 1 - \frac{767082}{2097000}$$

log 767082 = 5.8849
log 2097000 = 6.3216
log quotient = T.5633

$\rho = 1 - .3659$

$\rho = .63$

$r = .65 \pm .03$

$$\rho = 1 - \frac{6.64518.75}{2,097,000} = 1 - \frac{387113}{2,097,000}$$

log 387113 = 5.5878
log 2,097,000 = 6.3216
log quotient = T.2662

$\rho = 1 - .1846$

$\rho = .82$

$r = .83 \pm .02$

$$\rho = 1 - \frac{6.76925.5}{2,097,000} = 1 - \frac{461552}{2,097,000}$$

log 461552 = 5.6643
log 2,097,000 = 6.3216
log quotient = T.3427

$\rho = 1 - .2202$

$\rho = .78$

$r = .79 \pm .02$

COLOUR DRAWINGS

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

	LOUGHTON AND FALLOWS (L&F)		LOUGHTON AND HERON (L&H)		FALLOWS AND HERON (F&H)	
COLOUR.	d.	d^2	d	d^2	d	d^2
ALLAN. A.	·5	·25	38	1444·	38·5	1482·25
	60	3600·	40·5	1640·25	19·5	380·25
	4·5	20·25	1	1·	3·5	12·25
	24	576·	46·5	2162·25	22·5	506·25
	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	2401·	13·5	182·25	35·5	1260·25
	48·5	2352·25	45·5	2070·25	3	9·
	18·5	342·25	53·5	2862·25	35	1225·
	8	64·	20	400·	12	144·
	20·5	420·25	3·5	12·25	17	289·
	2	4·	17	289·	19	361·
	4	16·	58·5	3422·25	62·5	3906·25
	9	81·	7	49·	16	256·
	37·5	1406·25	18	324·	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	2970·25	46	2116·
	47·5	2256·25	52·5	2756·25	5	25·
	53	2809·	26	676·	27	729·
	5	25·	12·5	156·25	17·5	306·25
	58	3364·	45·5	2070·25	12·5	156·25
	19	361·	22	484·	3	9·
	10·5	110·25	31	961·	20·5	420·25
- FISHER. A.	41·5	1722·25	52	2704·	10·5	110·25
	43·5	1892·25	59·5	3540·25	16	256·
	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	8·5	72·25	0	0·
	2	4·	17	289·	15	225·
	7	49·	2	4·	9	81·
	5	25·	11	121·	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	3844·	52	2704·	10	100·
	22	484·	49	2401·	27	729·
	18	324·	13·5	182·25	4·5	20·25
	11·5	132·25	59·5	3540·25	48	2304·
	46·5	2162·25	14·5	210·25	32	1024·
	58	3364·	36	1296·	22	484·
	24·5	600·25	45	2025·	20·5	420·25
	33·5	1122·25	72	5184·	38·5	1482·25
	9	81·	23·5	552·25	14·5	210·25
	6·5	42·25	26	676·	19·5	380·25
	15	225·	15·5	240·25	·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	1332·25	31	961·	5·5	30·25
	11·5	132·25	5	25·	6·5	42·25
	18	324·	18·5	342·25	·5	·25
	16·5	272·25	58·5	3422·25	42	1764·
	22·5	506·25	36·5	1332·25	14	196·
	·5	·25	30	900·	30	900·
	18	324·	17	289·	1	1·
	13	169·	32·5	1056·25	19·5	380·25
	32·5	1056·25	24·5	600·25	8	64·
	25·5	650·25	20	400·	5·5	30·25
	10·5	110·25	20·5	420·25	10	100·
	2	4·	3·5	12·25	5·5	30·25
	47·5	2256·25	45	2025·	2·5	6·25
	12·5	156·25	·5	·25	12	144·
	18	324·	21	441·	3	9·
	54	2916·	86·5	7482·25	32·5	1056·25
	39	1521·	59·5	3540·25	20·5	420·25
	46·5	2162·25	48·5	2352·25	2	4·
	30·5	930·25	8·5	72·25	39	1521·
	14	196·	22	484·	36	1296·
	7	49·	·5	·25	7·5	56·25
- NEIL. T.	27·5	756·25	2·	4·	29·5	870·25

PAGE IX CONTD

COLOUR DRAWINGS

COLOUR		L & F		L & H		F & H	
		d	d^2	d	d^2	d	d^2
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·	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	870·25	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
	Σd^2		87141·		121,618·		61772·25

$$\rho = 1 - \frac{6 \cdot 87,141}{2,097,000} = 1 - \frac{522846}{2,097,000}$$

$\log 522800 = 5.7184$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.3968$

$\rho = 1 - .2494$

$\rho = .75$

$r = .77 \pm .02$

$$\rho = 1 - \frac{6 \cdot 121,618}{2,097,000} = 1 - \frac{729708}{2,097,000}$$

$\log 729700 = 5.8631$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.5415$

$\rho = 1 - .3479$

$\rho = .65$

$r = .67 \pm .03$

$$\rho = 1 - \frac{6 \cdot 61772.25}{2,097,000} = 1 - \frac{370634}{2,097,000}$$

$\log 370600 = 5.5689$
$\log 2,097,000 = 6.3216$
$\log \text{quotient} = \bar{1}.2473$

$\rho = 1 - .1767$

$\rho = .82$

$r = .83 \pm .02$

MARKS AND POSITIONS AWARDED IN MEMORY DRAWINGS — DRAWING TEST NUMBER 3

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

MEMORY DRAWINGS	MR. BURNS		MR. LOUGHTON				MR. FALLONS				MR. HERON			
	MARK	POS.	MARK	POS.	d	d^2	MARK	POS	d	d^2	MARK	POS	d	d^2
ALLAN A	18	60	27	10	50	2500.	25	26·5	33·5	11 22·25	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	56·25	6	125	8	64.
	13	60	11	90	30	900.	10	105·5	45·5	20 70·25	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.	18	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	22·5	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	4	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	30	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.
	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.
	4	91·5	14	68·5	23	529.	25	26·5	65	42 25.	23	17	74·5	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	21	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	84	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	42·5	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	29·5	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	45·5	1892·25
	16	37	24	25	12	144.	24	33·5	3·5	12·25	16	76	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	16.	21	39	57·5	3306·25
NEIL T.	16.	37	10	98·5	61·5	3782·25	11	102	65	4225.	19.	59	22	484.

XI

MEMORY DRAWINGS (CONTD)		MR. BURNS MARK	Pos	MR. LOUGHTON MARK	Pos	d	d^2	MR. FALLOWS MARK	Pos	d	d^2	MR. HERON. MARK	Pos	d	d^2
· NICHOLSON W		10	85·5	13	76·5	9	81·	16	70·5	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·	14	59	22	484·
		13	60	11	90	30	900·	18	59·5	·5	·25	11	107·5	47·5	2256·25
		4	112	17	48	64	40 96·	15	78·5	33·5	11 22·25	11	107·5	4·5	920·25
		12	69	18	44	25	625·	4	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	27·5	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	76	20·5	420·25
		15	44·5	20	37	7·5	56·25	15	78·5	34	11 56·	16	76	32	10 24·
· SCOTT W		2	122·5	21	34	58·5	3422·25	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	76	9·5	90·25
		2	122·5	4	102·5	0	0·	15	78·5	44	1936·	19	59	63·5	40 32·25
		14	52	7	111·5	59·5	3540·25	14	86·5	34·5	11 90·25	14	87	35	1225·
		10	85·5	10	97·5	13	169·	13	92·5	7	49·	12	100	14·5	210·25
		16	37	15	61	24	576·	20	50·5	13·5	182·25	25	5	32	10 24
		1	126·5	15	61	65·5	4290·25	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	27·5	24	576·
		7	101·5	26	14	84·5	7140·25	17	65·5	36	12 96·	20	48	53·5	2862·25
		8	96·5	5	118·5	22	484·	5	120·5	24	576·	20	48	48·5	2352·25
		10	85·5	27	10	75·5	5700·25	18	59·5	26	676·	21	39	46·5	2162·25
		30	1	17	48	47	2209·	26	18	17	289·	24	9·5	8·5	72·25
TAIT H		23	11·5	21	34	19·5	380·25	29	2·5	12	144·	14	84	72·5	5276·25
		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	625·	24	33·5	35·5	12 60·25	24	9·5	59·5	3540·25
		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	756·25	19	53	8·5	72·25	17	69	24·5	600·25
		20	22·5	29	2·5	20	400·	27	9	13·5	182·25	22	27·5	5	25·
		28	3·5	16	53·5	50	2500·	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	5929·
		13	60	22	31	29	841·	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	1892·25
		12	69	14	60	29	841·	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	70·5	26	676·	15	83	38·5	1482·25
							1329 1·								
	Σd^2						1329 65·25				71,490·75				15 69 90·

$$\rho = 1 - \frac{6.132965}{2,097,000} = 1 - \frac{797,792}{2,097,000}$$

$\log 797800 = 5·9019$
$\log 2,097,000 = 6·3216$
$\log \text{quotient} = \overline{T}·5803$

$\rho = 1 - ·3805$

$\rho = ·62$

$r = ·64 \pm ·04$

$$\rho = 1 - \frac{6.71491}{2,097,000} = 1 - \frac{428,945}{2,097,000}$$

$\log 428900 = 5·6323$
$\log 2,097,000 = 6·3216$
$\log \text{quotient} = \overline{T}·3107$

$\rho = 1 - ·2045$

$\rho = ·80$

$r = ·81 \pm ·02$

$$\rho = 1 - \frac{6.156990}{2,097,000.} = 1 - \frac{941940}{2,097,000}$$

$\log 941900 = 5·9740$
$\log 2,097,000 = 6·3216$
$\log \text{quotient} = \overline{T}·6524$

$\rho = 1 - ·4491$

$\rho = ·55.$

$r = ·57 \pm ·04$

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

	LOUGHTON AND FALLOWS		LOUGHTON AND HERON		FALLOWS AND HERON	
MEMORY.	L&F		L&H		F&H	
	d	d^2	d	d^2	d	d^2
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	1406·25	5·5	30·25
	5	25·	24·5	600·25	29·5	870·25
	1·5	2·25	26	676·	27·5	756·25
	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·	55	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	55	3025·	38·5	1482·25
	17	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·
- NEIL. T.	6	36·	59·5	3540·25	53·5	2862·25
	3·5	12·25	39·5	1560·25	43	1849·

MEMORY DRAWINGS

MEMORY		L&F		L&H		F&H	
		d	d^2	d	d^2	d	d^2
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.
		65	4225.	56	3136.	9	81.
		20	400.	14·5	210·25	5·5	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.	38·5	1482·25	8·5	72·25
TAIT H		31·5	992·25	53	2809.	94·5	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	34·5	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		1076305		1879265		1495625

$$\rho = 1 - \frac{6.\ 107{,}630.}{2{,}097{,}000} = 1 - \frac{645783}{2{,}097{,}000}$$

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

$\rho = 1 - .3080$

$\rho = .69$

$r = .71 \pm .03$

$$\rho = 1 - \frac{6.\ 187{,}927.}{2{,}097{,}000} = 1 - \frac{1127621}{2{,}097{,}000}$$

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

$\rho = 1 - .5379$

$\rho = .46$

$r = .48 \pm .05$

$$\rho = 1 - \frac{6.\ 149{,}563.}{2{,}097{,}000} = 1 - \frac{897{,}377}{2{,}097{,}000}$$

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

$\rho = 1 - .4280$

$\rho = .57$

$r = .57 \pm .04$

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		P colour. memory		COLOUR		P pencil. colour		MEMORY		P pencil. memory		TOTAL MARK IN DRAWING		
		MARK /120	Pos.	d^2	d	MARK /120	Pos	d	d^2	MARK /120	Pos	d	d^2		360	Posn.
ALLAN	A	79	31.5	756.25	27.5	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	14	125	61.5	3782.25	7	61	100	111
		33	113	49.	7	34	87.5	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	29	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	126	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	23	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	54
		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	65.5	48	58.5	9.5	90.25	21	124	56	3136.	10	88	127	95
FLETCHER	G.	84	24.5	441.	21	35	85.5	61	3721.	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	104
		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
		76	36	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	144	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	75	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	41.5	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	20	400.	100	4	12.5	156.25	24	212	251	14.5
		71	44	7396.	86	96	4	34	1369.	50	93	49	2401.	20	178	217	32.5
INNES	R	66	52	812.25	28.5	79	19.5	32.5	1056.25	42	48	4	16.	20	178	217	32.5
		67	49	756.25	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	149	188	53.5
		28	119	1482.25	38.5	37	81	38	1444.	28	119.5	.5	.25	6	54	93	119.5
		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	55	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	79.5	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	40	105.5	10	100	5	41	80	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	65.5
		92	18	650.25	25.5	70	28	10	100.	103	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	86.5	7482.25	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

MARKS, AND POSITIONS, IN 3 DRAWING TESTS — WITH FINAL DRAWING LIST D_S

PAGE XV CONTD

D_S

DRAWING TESTS.		PENCIL.				COLOUR.				MEMORY.				TOTAL MARK IN DRAWING			
		MARK	Posn.	d^2	d	MARK	Posn.	d	d^2	MARK	Posn.	d	d^2	360			Posn.
		120.				120.				120							
NICHOLSON. W.		62	60	400.	20	47	60·5	·5	·25	55	80·5	20·5	420·25	14	125	164.	64·5
		44	93	121	82·25	38·5	80	17·5	75·5	5700	·25	67	56	37	1369.	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	7·5	66	33·5	51·5	2652	·25	85	26	59	3481.	18	160	199	46·5
		39	100		64.	8	51	55	4·5	2025.		63	63	37	1369.	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	1296.		60	67·5	13	169.	14	130	169	65
		70	45		256.	16	55	48·5	3·5	12·25		80	32·5	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	35·5	1260·25	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	67	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	1296.		56	75	31·5	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	13	120·5	74·5	55	50·25	56	75	29	870.	11	99	138	86
		114	1	441		21	44	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	30	25.	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
		46	52		650·25	25·5	42	70·5	18·5	342·25		49	96	44	1936.	14	128	167	67
		36	106·5		90·25	9·5	30	96	10·5	110·25		40	105·5	1	1.	7	67	106	109
		28	119		461·25	21·5	14	114·5	1·5	2·25		49	96	23	529.	6	52	91	119·5
		40	98		1936.	44	49	54	41	1681.		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	40	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	3080·25	12	106	145	80·5
		46	38	17	64.	42	58	46	8	64.		102	4	34	1156.	22	197	236	21·5
		47	84		812·25	28·5	36	83	4	16.		70	54·5	32·5	1056·25	13	114	153	73·5
		49	83·5		400.	20	0	128	44·5	1980·25		38	108	24·5	600·25	5	48	84	121·5
		44	93	45	56·25	6·5	21	109	16	256.		76	41·5	51·5	2652·25	11	102	141	83
		111	4		100.	10	119	1	3	9.		94	11	7	49.	32	288	321	1
TAIT H.		83	26·5	20	25.	4·5	45	65·5	39	15	21	87	20·5	6	36.	22	196	215	35
		79	31·5	22	09.	14·5	70	28	3·5	12·25		56	75	43·5	1892·25	17	166	205	40·5
		84	21		306·25	14·5	55	48·5	24·5	756·25		81	31	10	100.	20	184	223	28
		47	84		342·25	18·5	52	52·5	34·5	1190·25		54	71	16	256.	15	137	156	70
		52	76		484.	22	48	58·5	17·5	306·25		78	36·5	39·5	1560·25	15	139	178	63·5
		27	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	272·25		33	114·5	5·5	30·25	7	60	99	112·5
		58	68		49.	7	69	31	37	1369.		77	38	30	900.	18	165	204	43·5
		45	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.	64	38	79·5	25	625.		46	12·5	42	1764.	18	100	199	46·5
		96	10		812·25	28·5	85	13	3	9.		76	41·5	31·5	992·25	24	218	254	13
		86	82	35	20·25	59·5	36	83	61	3721.		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	1225.		100	7	42	1764.	24	212	251	14·5
YARDLEY.		99	9.	21	62·25	46·5	20	111.	102	10,404.		61	64·5	55·5	3080·25	15	139	178.	63·5
	Σd^2			173,634·5				163,950·75						143,220·75			

$$\rho = 1 - \frac{6 \cdot 173,635}{2,097\,000} = 1 - \frac{1041810}{2\,097000}$$

$\log 1041810 = 6 \cdot 0179$
$\log 2097000 = 6 \cdot 3216$
$\log \text{quotient} = \overline{T} \cdot 6963$

$\rho = 1 - \cdot 4969$

$\rho = \cdot 50$

$r = \cdot 52 \pm \cdot 04$

$$\rho = 1 - \frac{6 \cdot 163951}{2,097000} = 1 - \frac{983706}{2,097000}$$

$\log 983706 = 5 \cdot 9929$
$\log 2097000 = 6 \cdot 3216$
$\log \text{quotient} = \overline{T} \cdot 6713$

$\rho = 1 - \cdot 4691$

$\rho = \cdot 53$

$r = \cdot 55 \pm \cdot 04$

$$\rho = 1 - \frac{6 \cdot 143,221}{2,097,000} = 1 - \frac{859326}{2\,097000}$$

$\log 859326 = 5 \cdot 9342$
$\log 2,097000 = 6 \cdot 3216$
$\log \text{quotient} = \overline{T} \cdot 6126$

$\rho = 1 - \cdot 4099$

$\rho = \cdot 59$

$r = \cdot 61 \pm \cdot 04$

ART TESTS

A.o

ART TESTS. (OBJECTIVE)		TEST 1		TEST 2		CORRELATION BETWEEN TESTS 1 and 2		Average mark in 1 & 2		TEST 3	TEST 4	TEST 5	TOTAL of 3.4.5.		CORRELATION BETWEEN AV. OF 1 and 2 AND 3.4.5.		TOTAL MARK. TESTS (1 & 2 average) 3,4,5	A.o
		MARK 39	ORDER	MARK 39	ORDER	d	d^2	39.	ORDER	14	16	10	40	ORDER	d	d^2	49.	ORDER
ALLAN. A.		28	25.5	18	77.5	52	27 04.	23	51	11	8	4	23	111.5	60.5	36 60.25	46	85.5
ALLEN. H.		23	76.5	22	29.5	47	22 09.	23.5	43.5	10	14	8	32	11.5	32	10 24.	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	46 24.	46.5	81.5
ARMSTRONG J.		21	94	18	77.5	19.5	380.25	19.5	86.5	11	10	4	25	92.5	6	36.	44.5	94
ALLSOP. J.		19	104	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	34 22.25	44.5	94
BLAKEY. L.		29	18	19	61.5	43.5	1892.25	24	35.5	11	10	4	25	92.5	54	32 49.	49	63.5
BRITTAN. N.		23	76.5	20	47.5	29	841.	21.5	68	11	16	7	34	3.5	64.5	41 60.25	55.5	14
BROWN. P.		29	18	12	120	102	10404.	20.5	78	12	12	7	31	19	59	34 81.	51.5	42
CARR. J.		25	54	24	17.5	36.5	1332.25	24.5	29	9	10	8	27	68	39	15 21.	51.5	42
CARMICHAEL. M.		14	125.5	10	126.5	1	1.	12	128	11	10	4	25	92.5	55.5	12 60.25	37	124
CAMPBELL. K.		20	102.5	12	120	17.5	306.25	16	112	11	12	7	30	27	85	72 25.	46	85.5
CARPENTER. R.		23	76.5	15	102.5	26	676.	19	94.5	11	12	5	28	54	40.5	16 40.25	47	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	53 29.	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	66 42.25	49.5	58
DAVISON. L.		22	89	16	96.5	7.5	56.25	19	94.5	11	12	6	29	38	56.5	31 92.25	48	70
DOBSON. K.		33	3.5	20	47.5	44	1936.	26.5	12	8	12	8	28	54	42	17 64.	54.5	25
DOUGHTY. W.		23	76.5	18	77.5	1	1.	20.5	78	6	10	3	19	126.5	48.5	23 52.25	39.5	115
DUNCAN. J.		27	36	22	29.5	6.5	42.25	24.5	29	11	12	3	26	81	52	27 04.	50.5	48.5
ELLIOT. F.		19	104	19	61.5	42.5	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	26.5	19.5	8	14	6	28	54	34.5	11 90.25	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	126.5	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.		14	115.5	13	114.5	1	1.	15	118	11	8	7	26	81	34	13 69.	41	111
FROST. J.		22	89	15	102.5	13.5	182.25	19	94.5	12	12	4	28	54	40.5	16 40.25	47	78
GARDNER. R.		27	36	21	38	22	484.	24	35.5	8	10	7	25	92.5	54	32 49.	49	63.5
GLOVER. A.		21	94	8	128	31	961.	14.5	122	6	8	5	19	126.5	4.5	20.25	33.5	124
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	40 32.25	49.5	58
GIBSON. W.		33	3.5	24	17.5	14	196.	28.5	4	13	12	4	29	38	34	11 56.	57.5	7
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	10 56.25	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	11 22.25	35	125
HARDY. R.		30	13	17	89	76	5776.	23.5	43.5	12	10	5	27	68.5	25	6 25.	50.5	48.5
HILL. R.		26	45.5	19	61.5	16	256.	22.5	58	9	16	8	33	7	51	26 01.	55.5	14
HARDING D.		24	64	20	47.5	16.5	272.25	22	63	10	14	5	29	38	25	6 25.	51	45.5
HEATHERINGTON A.		24	64	21	38	26	676.	22.5	58	10	16	1	27	68.5	10.5	1 10.25	49.5	58
HEDWORTH. I.		28	25.5	20	47.5	22	484.	24	35.5	10	14	7	31	19	16.5	2 72.25	55	19
HORNSBY. S.		21	94	22	29.5	67.5	4556.25	21.5	68	9	8	3	20	123	55	30 25.	41.5	108
HOWE. M.		22	89	16	96.5	7.5	56.25	19	94.5	7	16	4	25	92.5	2	4.	44	99.5
HOWE. R.		22	89	23	24	65	4225.	22.5	58	10	12	4	26	81	23	5 29.	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	79 21.	50	52
HUNTER. J.		18	110.5	17	89	21.5	462.25	17.5	104.5	7	14	7	28	54	50.5	25 50.25	45.5	89.5
HUDDLESTONE. N.		27	36	27	5	31	961.	27	10	11	8	9	28	54	44	19 36.	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	78 32.25	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	13 69.	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	11 90.25	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	18 92.25	40	114
LANE. B.		25	54	19	61.5	7.5	56.25	24	10	9	10	4	23	111.5	101.5	103 02.25	50	52
LEACH. A.		22	89	25	10	75	5625.	23.5	43.5	12	6	6	24	103.5	60	36 00.	47.5	74.5
LITTLE. D.		30	13	21	38	25	625.	25.5	19.5	8	14	8	30	27	7.5	56.25	55.5	14
LOWSON. J.		21	94	14	108.5	11.5	132.25	17.5	104.5	11	12	5	28	54	50.5	25 50.25	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	60 06.25	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	87 42.25	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	15 60.25	55	19
McCALLA. A.		24	36	23	24	12	144.	25	24.5	10	16	8	24	38	13.5	182.25	54	30
Mc. CULLEY. K.		21	94	22	29.5	67.5	4556.25	21.5	68	12	12	9	33	7	61	37 21.	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	66 42.25	49.5	58
MINNIKIN. R.		24	36	23	24	12	144.	25	24.5	12	10	5	27	68.5	44	19 36.	52	40
MOLE. H.		29	18	20	47.5	29.5	870.25	24.5	29	9	8	8	25	92.5	63.5	40 32.25	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	15 60.25	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

PAGE XVII CONTD.

A.o

ART TESTS [OBJECTIVE]		TEST 1 MARK	ORDER	TEST 2 MARK	ORDER	d	d^2	Average mark 1 & 2	in ORDER	TEST -3-	TEST -4-	TEST -5-	TOTAL OF 3.4.5 MARK	ORDER	d	d^2	TOTAL MARK TESTS (1 & 2 average)	3.4.5. ORDER
		39		39		d	d^2	39		14	16	10	40		d	d^2	79	ORDER
NICHOLSON H		20	102.5	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		27	36	12	120	84	7056.	19.5	86.5	9	12	6	27	68.6	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	86.5
PRINGLE R		20	102.5	19	61.5	41	1681.	19.5	86.5	7	14	7	28	54	32.5	1056.25	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	19.5	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	19.5	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	59	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 W		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	122
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	1056.25	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	19.5	10	12	6	28	54	34.5	1190.25	53.5	32.5
TAYLOR R		22	89	24	17.5	71.5	5112.25	23	51	9	8	4	21	120	69	4761.	44	99.5
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
HAKE 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	34	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	49.	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	28	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		

$$\rho = 1 - \frac{6.\ 161580}{2,097000}$$

$$= 1 - \frac{969480}{2,097000}$$

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

$\rho = 1 - .4623$

$\rho = .54$

$r = .56 \pm .04$

$$\rho = 1 - \frac{6.\ 239,306}{2,097,000.}$$

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

$\log 1435836 = 6.1571.$
$\log 2,097000 = 6.3216.$
$\log \text{quotient} = \overline{1}.8355.$

$\rho = 1 - .6847$

$\rho = .32$

$r = .33 \pm .05$

INTER-CORRELATION OF DRAWING ABILITY WITH RESULTS OF ART TESTS

	DRAWING ABILITY (AVERAGE) D_5 AND ART TESTS 1 and 2 $A_{0\ 1+2}$		DRAWING ABILITY (AVERAGE) D_5 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	7482.25
	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.	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.
	63.5	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	25.5	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	10520.25	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	1314.25
	23	529.	38	1444.
	45	2025.	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_5 AND $A_{1.2}$

D_5 AND $A_{3.4.5.}$

	DRAWING ABILITY (AVERAGE) Bs. AND ART TESTS 1 and 2 Ao 1 & 2		DRAWING ABILITY (AVERAGE) As. AND ART TESTS 3.4.5. Ao 3.4.5.	
	d	d^2	d	d^2
NICHOLSON. W.	11·5	17 22·25	29·5	870·25
	12	144·	30	900·
	47·5	22 56·25	48·5	2352·25
	8·5	72·25	43	1849·
	40	16 00·	22	484·
	21	441·	5	25·
	36·5	13 32·25	4	16·
	21·5	462·25	46·5	21 62·25
	26	676·	28	784·
	39·5	15 60·25	28·5	812·25
	28	784·	61	3721·
	3	9·	7·5	56·25
	10·5	110·25	46	2116·
	·5	·25	75	5625·
	14·5	210·25	73	5329·
	2·5	6·25	51	2601·
	71·5	51 12·25	52	2704·
	10	100·	20·5	420·25
ROBSON. J.	66·5	44 22·25	48	2304·
	91·5	83 72·25	78	6084·
	4	16·	35	1225·
	10·5	110·25	48·5	2352·25
	50	2500·	92	8464·
	9·5	90·25	40·5	1640·25
	·5	·25	18	324·
	27·5	756·25	14	196·
	15·5	240·25	16·5	272·25
	7·5	56·25	38·5	1482·25
	11	121·	77·5	6006·25
	0	0·	32·5	1056·25
	9·5	90·25	37·5	1406·25
	34·5	1190·25	26·5	702·25
	3	9·	14·5	210·25
STEPHENSON. A.	22·5	506·25	66·5	4422·25
	53·5	2862·25	1·5	2·25
	1	1·	9·5	90·25
	1	1·	67·5	4556·25
	15·5	240·25	3	9·
	21	441·	13·5	182·25
	23	529·	92	8464·
	3·5	12·25	32	1024·
	·5	·25	5	25
	3	9·	2	4
	·5	·25	44	1936·
	68·5	4692·25	68	4624·
	64	4096·	88·5	7832·25
	60·5	3660·25	6	36·
	39	1521·	43	1849·
	91·5	8372·25	98·5	9702·25
	2·5	6·25	0	0·
	12·5	156·25	26·5	702·25
	9	81·	13	169·
YARDLEY R.	12·5	156·25	44·5	1980·25
		171,934·5		249,944·75

$$\rho = 1 - \frac{6 \cdot 171935}{2 \cdot 097 \cdot 000} = 1 - \frac{1031610}{2 \cdot 097 \cdot 000}$$

$\log 1031610 = 6 \cdot 0137$
$\log 2 \cdot 097000 = 6 \cdot 3216$
$\log \text{quotient} = \bar{1} \cdot 6921$

$\rho = 1 - \cdot 4921$

$\rho = \cdot 51$

$$\rho = 1 - \frac{6 \cdot 249 \cdot 945}{2 \cdot 097 \cdot 000} = 1 - \frac{1499670}{2 \cdot 097 \cdot 000}$$

$\log 1499670 = 6 \cdot 1761$
$\log 2 \cdot 097000 = 6 \cdot 3216$
$\log \text{quotient} = \bar{1} \cdot 8543$

$\rho = 1 - \cdot 7153$

$\rho = \cdot 28.$

$r = \cdot 53 \pm \cdot 04$ | $r = \cdot 29 \pm \cdot 05$

INTER-CORRELATION OF DRAWING ABILTY (D_S) WITH FINAL ART TEST LIST (A_o)

AND CONSTRUCTION OF COMPOSITE ARTISTIC ABILITY LIST, INVOLVING D_S AND A_o WITH EQUAL WEIGHTS

		$D_{S.}$	D_S.	A_o		d	d^2	A_C
	321	288						
ALLAN. A.		180	20 31	15 85·5		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	28·5 5		105	110 25·	35·5 51·5
		124	16 58·5	24·5 14		44·5	1980·25	40·5 34·5
		140	16 62	13·5 97		35	1225·	29·5 80·5
		92	10 93	18 63·5		29·5	870·25	28 86
		166	18 40·5	24·5 14		25·5	650·25	42·5 27
		60	7 112·5	20·5 42		69·5	4830·25	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 85·5		42·5	1806·25	15 118·5
		68	8 108	16 78		30	900·	24 97·5
		236	26 5·5	22 35·5		30	900·	48 10
		204	23 17·5	15·5 81·5		64	4096·	38·5 40·5
		200	22 20	22 35·5		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	1122·25	39·5 37·5
		85	9 100	8·5 115		15	225·	14·5 112
		95	11 89	19·5 48·5		40·5	1640·25	30·5 75·5
		34	4 124	12 102·5		21·5	462·25	16 116
		163	16 54	22·5 32·5		24·5	600·25	38·5 40·5
		110	12 77	24 19		8	64·	36 48
		88	10 95	8 118·5		23·5	552·25	18 110
		161	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	2601·	35·5 51·5
		231	26 9	18·5 58		49	2401·	44·5 19
		182	20 30	26·5 7		23	529·	46·5 13
		230	26 10	17 70		60	3600·	43 25
		190	21 24	16·5 74·5		50·5	2550·25	37·5 44·5
HALL. R.		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	1122·25	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	156·25	55·5 3
		178	20 32·5	17 70		37·5	1406,25	37 46
INNES. R.		178	20 32·5	31 3		29·5	870·25	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	1190·25	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	3906·25	25 93
		185	21 26	16·5 74·5		48·5	2352·25	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	2450·25	32·5 67·5
		41	5 123	16·5 74·5		48·5	2352·25	21·5 104
		197	22 21·5	20 45·5		24	576·	42 29·5
		87	10 96	8 118·5		22·5	506·25	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	18·5 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	4422·25	33·5 62·5

INTER-CORRELATION OF D_S AND A_O AND FORMATION OF 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 6·5	11·5	104	39	1521·	25·5	90
		166	18 40·5	22	35·5	5	25·	40	36
		113	13 75	17	70	5	25·	30	78·5
		233	26 7·5	20	45·5	38	1444·	46	14·5
		100	11 85	14	93·5	85	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	99·5	71·5	5112·25	33	67·5
		137	15 70	14	57	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	59
		160	18 46·5	20·5	4	42·5	1806·25	48·5	9
		218	24 13	9·5	113	100	10000·	33·5	62·5
		169	19 38	22	38·5	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

$$\rho = 1 - \frac{6 \cdot 166803}{2,097000}$$
$$= 1 - \frac{1000820}{2,097000}$$

log 1000820 = 6·0004
log 2097000 = 6·3216
log quotient = $\bar{1}$·6788·

$\rho = 1 - \cdot 4773$

$\rho = \cdot 52.$

$r = \cdot 54 \pm \cdot 04$

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

Since $r_{A_{12} \cdot D_S} = \cdot 53$

$r_{A_{345} \cdot D_S} = \cdot 29$

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

$$r_{A_O D_S} = \frac{\cdot 53 + \cdot 29}{\sqrt{2(1 + \cdot 33)}}$$
$$= \cdot 50$$

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

CORRELATION OF

D_S WITH A_O

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
ALLAN. A.	55·5	30 80·25	36	12 96·	63·5	40 32·25
	98	96 04·	50·5	25 50·25	84	70 56·
	18·5	342·25	25	625·	43	18 49·
	72	56 25·	46·5	21 62·25	39·5	15 60·25
	52	27 04·	47·5	22 56·25	23	529·
	36	12 96·	96	92 16·	88·5	78 32·25
	47·5	22 56·25	41	16 81·	15·5	240·25
	33·5	11 22·25	23	529·	7·5	56·25
	60·5	36 60·25	46·5	21 62·25	69·5	48 30·25
	9·5	90·25	71·5	51 12·25	43·5	18 92·25
	74·5	55 50·25	65	4225·	77	59 29·
	28	784·	3	9·	46·5	21 62·25
	·5	·25	33	10 89·	42·5	18 06·25
	57	3249·	45	2025·	55	30 25·
	25·5	650·25	56	31 36·	31·5	992·25
	86·5	75 82·25	65	4225·	69	4761·
	7·5	56·25	4·5	20·25	5·5	30·25
	50·5	25 50·25	45	2025·	75·5	5700·25
	13·5	182·25	4	16·	49	2401·
	86	73 96·	78·5	61 62·25	38·5	14 82·25
	24	576·	29·5	870·25	13·5	182·25
	54	29 16·	78·5	61 62·25	44·5	19 80·25
	84	70 56·	56	31 36·	·5	·25
	66·5	44 22·25	14·5	210·25	73·5	54 02·25
	11·5	132·25	48·5	2352·25	36·5	13 32·25
	60·5	3660·25	40	1600·	60·5	3660·25
	3·5	12·25	1	1·	29·5	1870·25
FISHER. A.	52·5	27 56·25	81·5	66 42·25	28	784·
	26·5	702·25	36	12 96·	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	51 84·	47·5	2256·25	22·5	506·25
	1	1·	5·5	30·25	8·5	72·25
	104	108 16·	82·5	68 06·25	20·5	420·25
	109·5	119 90·25	94	8836·	103	1069·
	28·5	812·25	6·5	42·25	52	2704·
	81	65 61	99	9801·	80·5	64 80·25
	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	100 00·	105	11025·	81·5	6642·25
	34	11 56	16	256·	5·5	30·25
	6	36	41	16 81·	5·5	30·25
	60·5	36 60·25	72·5	52 56·25	74·5	55 50·25
	52·5	27 56·25	4	16·	75·5	5700·25
	53	28 09·	62·5	39 06·25	8·5	72·25
	35·5	12 60·25	39·5	15 60·25	16	256
	31·5	992·25	37·5	14 06·25	65·5	4290·25
	29	841·	52	2704·	0	0·
	32·5	10 56·25	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·	79	6241·	58	3364·

PAGE XXIII CONTD

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·	5·5	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·
		298,636·5		298698·75		291,303·5
		$\rho = 1 - \frac{6.298637}{2,097,000}$		$\rho = 1 - \frac{6.298699}{2,097000}$		$\rho = 1 - \frac{6.291304}{2,097,000}$
		$= 1 - \frac{1791822}{2097000}$		$= 1 - \frac{1953666}{2097000.}$		$= 1 - \frac{1747824}{2,097000}$
		log 1791822 = 6·2534		log 1953666 = 6·2909		log 1747824 = 6·2425
		log 2,097000 = 6·3216		log 2,097000 = 6·3216		log 2,097000 = 6·3216.
		log quotient = $\bar{1}$·9318		log quotient = $\bar{1}$·9693		log quotient = $\bar{1}$·9209
		$\rho = 1 - ·8547$		$\rho = 1 - ·9317$		$\rho = 1 - ·8335.$
		$\rho = ·15$		$\rho = ·07$		$\rho = ·17.$
		$r = ·16 \pm ·06$		$r = ·07 \pm ·06$		$r = ·18 \pm ·06$

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

		Intelligence and Art Tests (1+2) Ao 1+2		Intelligence and Art Tests (3.4.5) Ao. 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	25.5	650.25
		85.5	7310.25	22	484.
		24.5	600.25	64	4096.
Neil T		26.5	702.25	2	4.

PAGE XXV CONTD. 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 W		77.5	6006.25	6.5	42.25
		42	1764.	24	576.
		1.5	2.25	.5	.25
		20	400.	32.5	1056.25
		45.5	2070.25	27.5	756.25
		60	3600.	34	1156.
		16	256.	48.5	2352.25
		31.5	992.25	6.5	42.25
		47.5	2256.25	6.5	42.25
		15.5	240.25	83.5	6972.25
		14	196.	19	361.
		42.5	1806.25	32	1024.
		13.5	182.25	49	2401.
		0	0.	75.5	5700.25
		62	3844.	3.5	12.25
		27.5	756.25	21	441.
		59.5	3540.25	40	1600.
		55	3025.	65.5	4290.25
ROBSON J		17.5	306.25	36	1296.
		49	2401.	35.5	1260.25
		14	196.	17	289.
		2.5	6.25	35.5	1260.25
		4	16.	46	216.
		55	3025.	86	7396.
		29	841.	10.5	110.25
		5.5	30.25	19	361.
		69.5	4830.25	37.5	1406.25
		18.5	240.25	46.5	2162.25
		22	484.	88.5	7832.25
		100.5	10100.25	68	4624.
		85	7225.	37	1369.
		5.5	30.25	55.5	3080.25
		78	6084.	96.5	9120.25
STEPHENSON A		23	529.	67	4489.
		55	3025.	110	12100.
		32.5	1056.25	43	1849.
		39	1521.	27.5	756.25
		10	100.	28.5	812.25
		45	2025.	10.5	110.25
		26	676.	43	1849.
		2.5	6.25	33	1089.
		15	225.	20.5	420.25
		103	10609.	104	10816.
		8	64.	51.5	2652.25
		10	100.	10.5	110.25
		14	196.	38.5	1482.25
		42.5	1806.25	24	576.
		54.5	2970.25	58.5	3422.25
		7.5	56.25	14.5	210.25
		89	7921.	86.5	7582.25
		6	36.	20	400.
		102.5	10506.25	106.5	11342.25
YARDLEY R.		5.5	30.25	37.5	1406.25
	Σd^2		217,928.5		288,121.5
		$\rho = 1 - \frac{6.217929}{2,097000}$		$\rho = 1 - \frac{6.288122}{2,097000.}$	
		$= 1 - \frac{1307574}{2,097000}$		$= 1 - \frac{1728732}{2,097000}$	
		$\log 1307574 = 6.1165$		$\log 1728732 = 6.2378$	
		$\log 2097000 = \underline{6.3216}$		$\log 2097000 = \underline{6.3216.}$	
		$\log \text{quotient} = \underline{\bar{1}.7949}$		$\log \text{quotient} = \underline{\bar{1}.9162}$	
		$\rho = 1 - .6236$		$\rho = 1 - .8245$	
		$\rho = .38$		$\rho = .18.$	
		$r = .40 \pm .05$		$r = .19 \pm .06$	

INTER-CORRELATION OF "INTELLIGENCE" WITH DRAWING TESTS (D_S), ART TESTS (A_o), AND A_C

	I	D_S			A_o			D_S+A_o. A_C		
			d	d^2		d	d^2		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	841·	81·5	·5	·25	102	20	400·
	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	506·25	51·5	24	576
	67	58·5	8·5	72·25	14	53	2809·	34·5	32·5	10 56·26
	60	62	2	4·	97	37·	1369·	80·5	20·5	420·25
	29·5	93	63·5	40 32·25	63·5	34	11 56·	86	56·5	31 92·25
	4·5	40·5	36	1296	14	9·5	90·25	27	22·5	506·25
	34·5	112·5	78	6084·	42	7·5	56·25	88	53·5	2862·25
	6	16	10	100	42	36	1296·	23·5	17·5	306·25
	80	119·5	39·5	15 60·25	124	44	1936·	124	44	1936.
	71	128	57	3249·	85·5	14·5	210·25	118·5	47·5	22 56·25
	64·5	108	43·5	18 92·25	78	14·5	210·25	97·5	33	1089·
	89·5	5·5	84	7056·	35·5	54	2916·	10	79·5	6320·25
	23·5	17·5	6	36	81·5	58	3364·	40·5	17	289·
	84·5	20	64·5	41 60·25	35·5	49	2401·	21·5	63	3969·
	11	23	12	144	25	14	196·	19	8	64·
CROUDACE. J.	39	117·5	78·5	61 62·25	89·5	50·5	2550·25	105	66	4356.
	100	78·5	21·5	462·25	58	42	1764·	78·5	24·5	600·25
	112	52	60	3600	70	42	1764·	59	53	2809·
	12	58·5	46·5	21 62·25	25	13	169·	37·5	25·5	650·25
	38	100	62	3844	115	77	5929.	112	74	5476·
	56·5	89	32·5	10 56·25	48·5	8	64·	75·5	19	361·
	62	124	62	3844	1025	40·5	1640·25	116	54	2916·
	45·5	57	11·5	132·25	32·5	13	169.	40·5	5	25·
	23·5	77	53·5	2862·25	19	4·5	20·25	98	24·5	600·25
	94·5	95	·5	·25	118·5	24	576.	110	15·5	240·25
	36·5	40·5	24	576	45·5	9	81·	48	11·5	132·25
	81	107	26	676	111	30	900·	110	29	841·
	104	104·5	2·5	6·25	78	29	841·	97·5	9·5	90·25
	1	49	48	2304	63·5	62·5	3906·25	93	92	8464·
	126	126	0	0	127	1	1·	128	2	4·
	7	76	69	4761	25	18	324·	51·5	44·5	1980·25
	117	9	108	11664	58	59	3481·	19	98	9604·
	9·5	30	20·5	420·25	7	2·5	6·25	13	4·5	20·25
	104	10	94	8836	70	34	1156·	25	79	6241·
	33	24	9	81	74·5	41·5	1722·25	44·5	11·5	132·25
HALL. R.	87	104·5	17·5	306.25	125	38	1444·	124	37	1369·
	8	25	17	289	48·5	40·5	1640·25	34·5	26·5	702·25
	67	34	33	1089	14	53	2809.	19	48	2304·
	116	12	104	10816	45·5	70·5	4970·25	17	99	9801·
	92	71·5	20·5	420·25	58	34	1156.	71·5	20·5	420·25
	22	28	6	36	19	3	9.	21·5	·5	·25
	29·5	103	73·5	5402·25	108	78·5	6162·25	108	78·5	6162·25
	45·5	98	52·5	2756·25	99·5	54	2916·	99·5	54	2916·
	111	69	42	1764·	66·5	44·5	1980·25	71·5	39·5	1560·25
	77	53·5	23·5	552·25	52	25	625·	48	29	841·
	52	106	54	2916	89·5	37·5	1406·25	102	50	2500·
	58	19	39	1521	19	39	1521·	115	57	3249·
	52	14·5	37·5	1406·25	2	50	2500.	3	49	2401·
	77	32·5	44·5	1980·25	70	7	49·	48	29	841·
INNES. R.	36·5	32·5	4	16	3	33·5	1122·25	6	30·5	930·25
	25·5	36	10·5	110·25	30	4·5	20·25	29·5	4	16·
	109·5	127	17·5	306·25	111	1·5	2·25	126	16·5	272·25
	17	53·5	36·5	1332·25	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	529·	106·5	15·5	240·25
	79	114·5	35·5	1260·25	52	27	729·	93	14	196·
	21	26	5	25	74·5	53·5	2862·25	44·5	23·5	552·25
	31·5	37	5·5	30·25	14	17·5	306·25	23·5	8	64·
	83	40·5	42·5	1806·25	89·5	6·5	42·25	67·5	15·5	240·25
	89·5	123	33·5	1122·25	74·5	15	225·	104	14·5	210·25
	27·5	21·5	6	36	45·5	18	324·	29·5	2	4·
	69	96	27	729	113·5	49·5	2450·25	110	41	1681·
	45·5	17·5	38	1444	19	26·5	702·25	11·5	34	1156·
	114·5	55·5	59	3481	30	34·5	7140·25	39	78·5	5700·25
	96	45	51	2601	25	71	5041·	31	65	4225·
	52	55·5	3·5	12·25	50	6	36·	56	4	16.
	43	11	32	1024·	40	3	9.	14·5	28·5	812·25
	114·5	87	27·5	756·25	58	56·5	3192·25	80·5	34	1156·
	4·5	32	77·5	6006·25	42	37·5	1406·25	71·5	67	4489·
NEIL. T.	17	91·5	74·5	5550·25	25	8	64	62·5	45·5	2070·25

PAGE XVII CONTD INTER-CORRELATION OF "INTELLIGENCE" WITH D_S, A_O AND A_C

	I	D_S			A_O			D_S+A_O		
			d	d^2		d	d^2	A_C	d	d^2
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 09	104	14	196	90	28	7 84
	62	40·5	21·5	462·25	35·5	26·5	702·25	36	26	6 76
	20	75	55	30 25·	70	50	25 00	78·5	58·5	34 22·25
	49·5	7·5	32	17 64·	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	992·25
	87	84	3	9·	52	35	12 25	78·5	8·5	72·25
	94·5	94	15	·25	52	44·5	19 80·25	82	12·5	156·25
	120	43·5	76·5	58 52·25	97	23	529	71·5	48·5	23 52·25
	59	89	30	900·	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	529	56	54	29 16
	45·5	3	42·5	18 06·25	93·5	48	23 04	25	20·5	420·25
	98	116	18	324·	105·5	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	385	74·5	55 50·25	51·5	51·5	26 52·25
	93	121·5	28·5	812·25	122	29	841	121·5	28·5	812·25
	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	484·	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	101 00·25	8·5	97·5	95 06·25	4	102	104 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	841·	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	992·25
THOMAS G	13	121·5	108·5	11772·25	108	95	90 25	117	104	108 16·
	49·5	83	33·5	11 22·25	93·5	44	19 36	93	43·5	18 92·25
	41	1	40	16 00·	8·5	32·5	10 56·25	1	40	16 00
	9·5	35	25·5	650·25	25	15·5	240·25	16	6·5	42·25
	64·5	40·5	20	400·	32·5	32	10 24·	37·5	27	729
	77	28	49	2401·	99·5	22·5	506·25	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	870·25
	19	125	106	11236·	126	107	11449·	127	108	11664
	120	112·5	7·5	56·25	102·5	17·5	306·25	106·5	13·5	182·25
	122	43·5	78·5	6162·25	118·5	3·5	12·25	89	33	1089
	54	4	50	2500·	81·5	27·5	756·25	27	27	729
	25·5	7·5	18	324·	10	15·5	240·25	5	20·5	420·25
	62	46·5	15·5	240·25	4	58	3364	9	53	2809
	97	13	84	7056·	113	16	256	62·5	34·5	1190·25
	124·5	38	86·5	7582·25	35·5	89	7921	32·5	92	8464·
	74	80·5	6·5	42·25	58	16	256	75·5	1·5	2·25
	108	145	93·5	8742·25	1	107	11449	2	106	11236
YARDLEY R	56·5	63·5	7	49·	30	26·5	702·25	42·5	14·	196
	Σd^2			299,733·5			229,694·			254,985·25

$$\rho = 1 - \frac{6 \cdot 299734}{2{,}097000} = 1 - \frac{1798404}{2{,}097000}$$

log 1798404 = 6·2544
log 2097000 = 6·3216
log quotient T·9328

$\rho = 1 - \cdot 8576$

$\rho = \cdot 14$

$r = \cdot 15 \pm \cdot 06$

D_S WITH "g"

$$\rho = 1 - \frac{6 \cdot 229694}{2{,}097000} = 1 - \frac{1378164}{2{,}097000}$$

log 1378164 = 6·1392
log 2097000 = 6·3216
log quotient T·8176

$\rho = 1 - \cdot 6570$

$\rho = \cdot 34$ $r = \cdot 35 \pm \cdot 05$

ALSO BY SPEARMAN'S FORMULA FOR CORRELATION OF SUMS.

SINCE
$r_{12 \cdot g} = \cdot 40$
$r_{345 \cdot g} = \cdot 19$
$r_{A_{12345}} = \cdot 33$

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

A_O WITH "g"

$$\rho = 1 - \frac{6 \cdot 2574985}{2{,}097000} = 1 - \frac{1529910}{2{,}097000}$$

log 1529910 = 6·1847.
log 2097000 = 6·3216.
log quotient T·8631.

$\rho = 1 - \cdot 7297.$

$\rho = \cdot 27.$ $r = \cdot 28 \pm \cdot 06$

ALSO SINCE.
$r_{D_S g} = \cdot 15$
$r_{A_O g} = \cdot 35$
$r_{D_S A_O} = \cdot 54$

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

A_C WITH "g"

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 TO r AND CALCULATION OF PROBABLE ERRORS

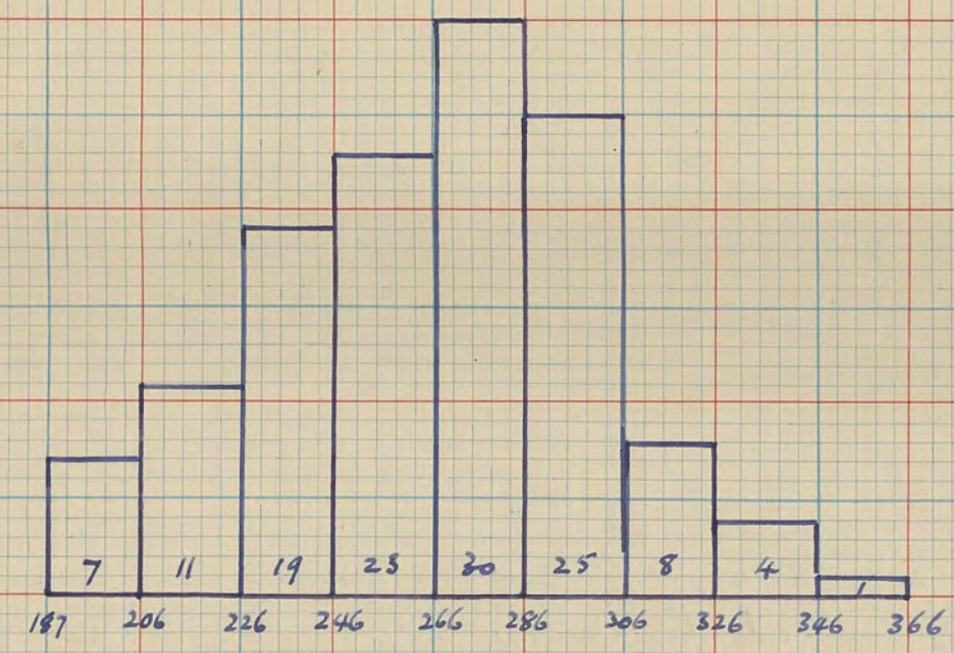
1. CONVERSIONS FROM ρ TO r WERE EFFECTED BY MEANS OF THE TABLE GIVEN BY K. PEARSON, F.R.S. IN DRAPERS CO. RESEARCH MEMOIRS, BIOMETRIC SERIES IV. 1907. P.18.

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

Now, $\log \cdot 67449 = \bar{1}\cdot 8290$.
$\log 128 = 2\cdot 1072$.
$\log \sqrt{128} = 1\cdot 0536$.
$\log \frac{\cdot 67449}{\sqrt{128}} = \bar{2}\cdot 7754$.

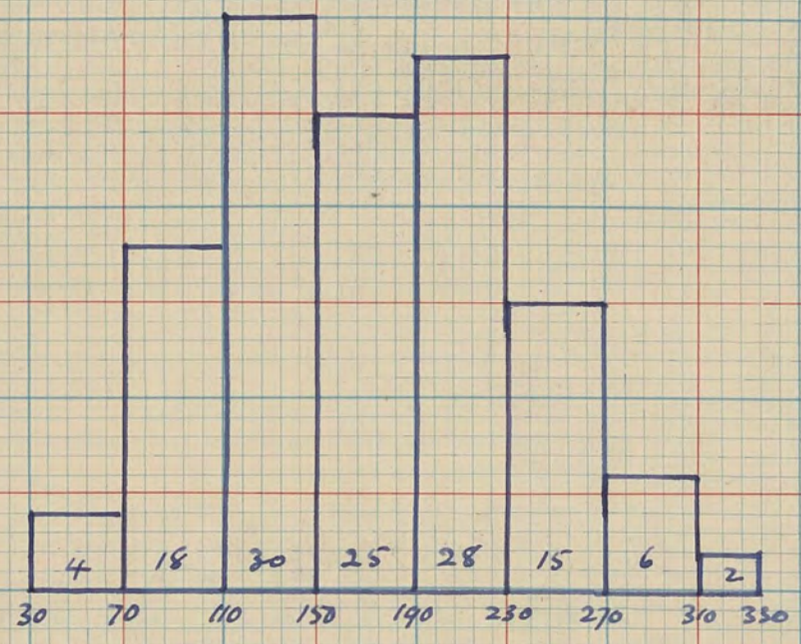
$\therefore \frac{\cdot 67449}{\sqrt{128}} = \cdot 060$. $\therefore$ P.E $= (1-r^2) \times \cdot 06$.

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



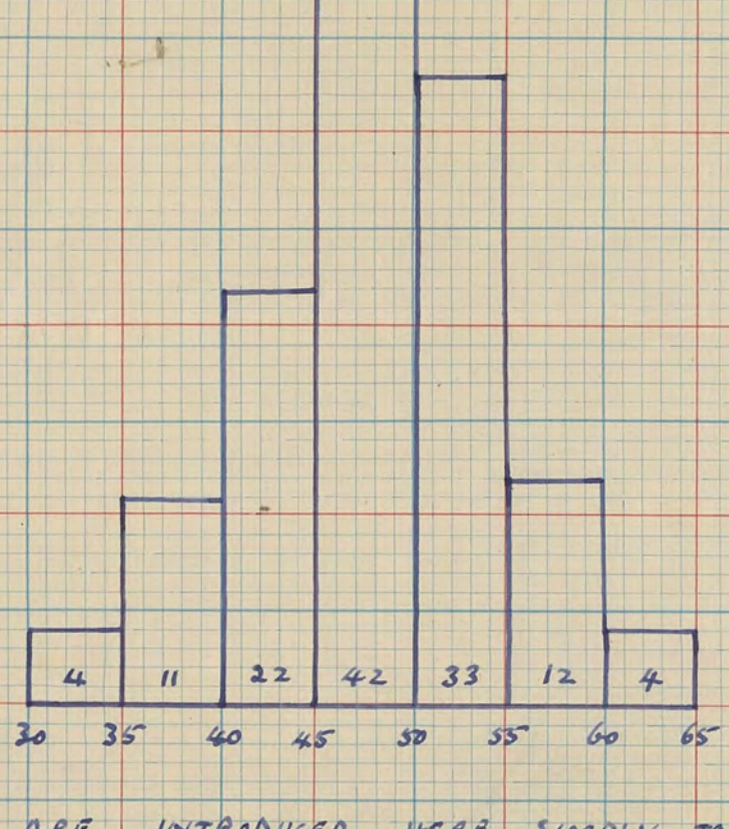
N = 128

DISTRIBUTION OF MARKS GAINED IN THE INTELLIGENCE TESTS LIST I



N = 128

DISTRIBUTION OF MARKS GAINED IN THE DRAWING TESTS LIST D_5



N = 128

DISTRIBUTION OF MARKS GAINED IN THE ART TESTS LIST A_0

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.

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

2^{nd} . 6^{th} . $1 \cdot 5^{th}$. 5^{th}

IN 128 DRAWINGS

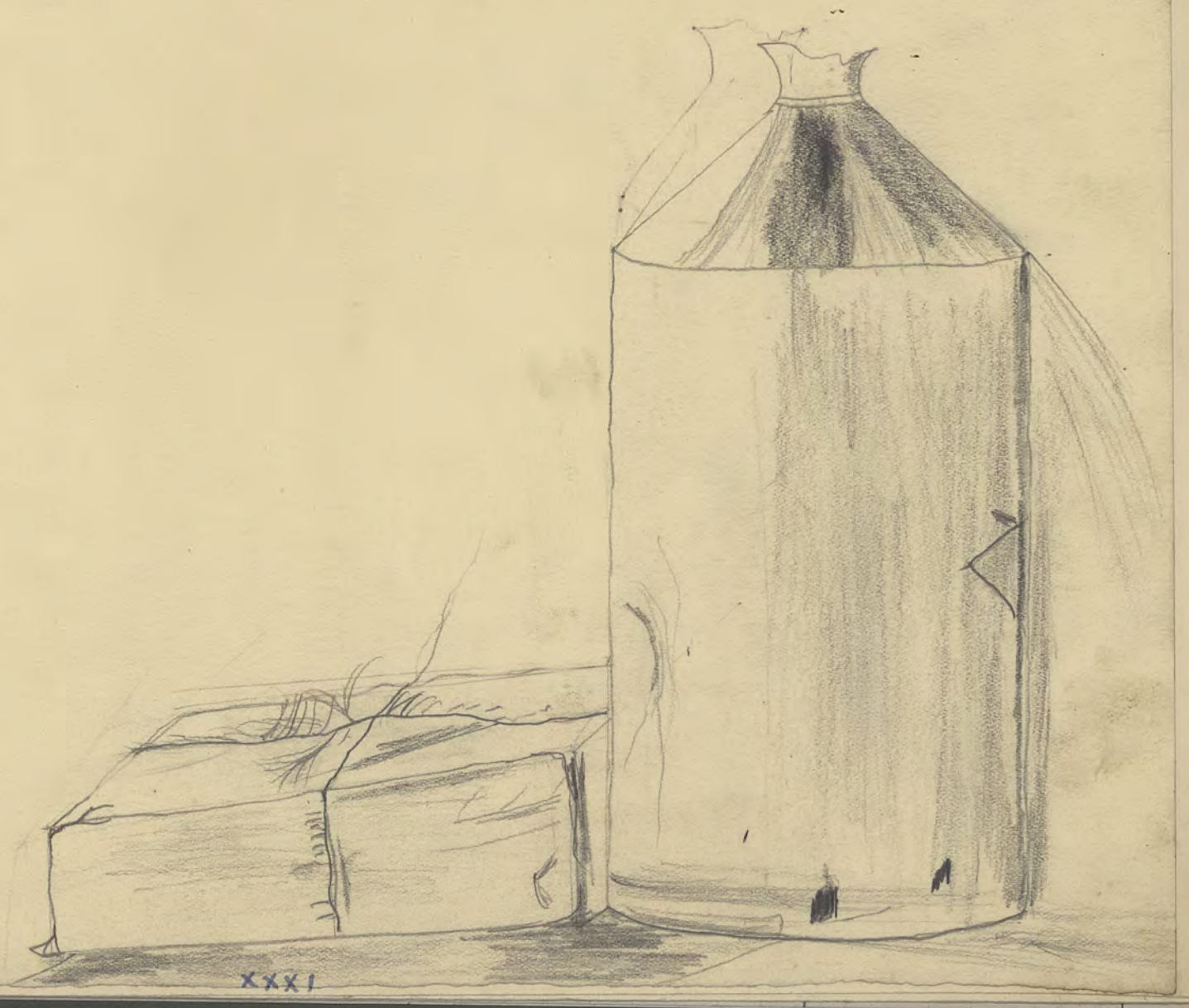
ONE OF THE BEST DRAWINGS

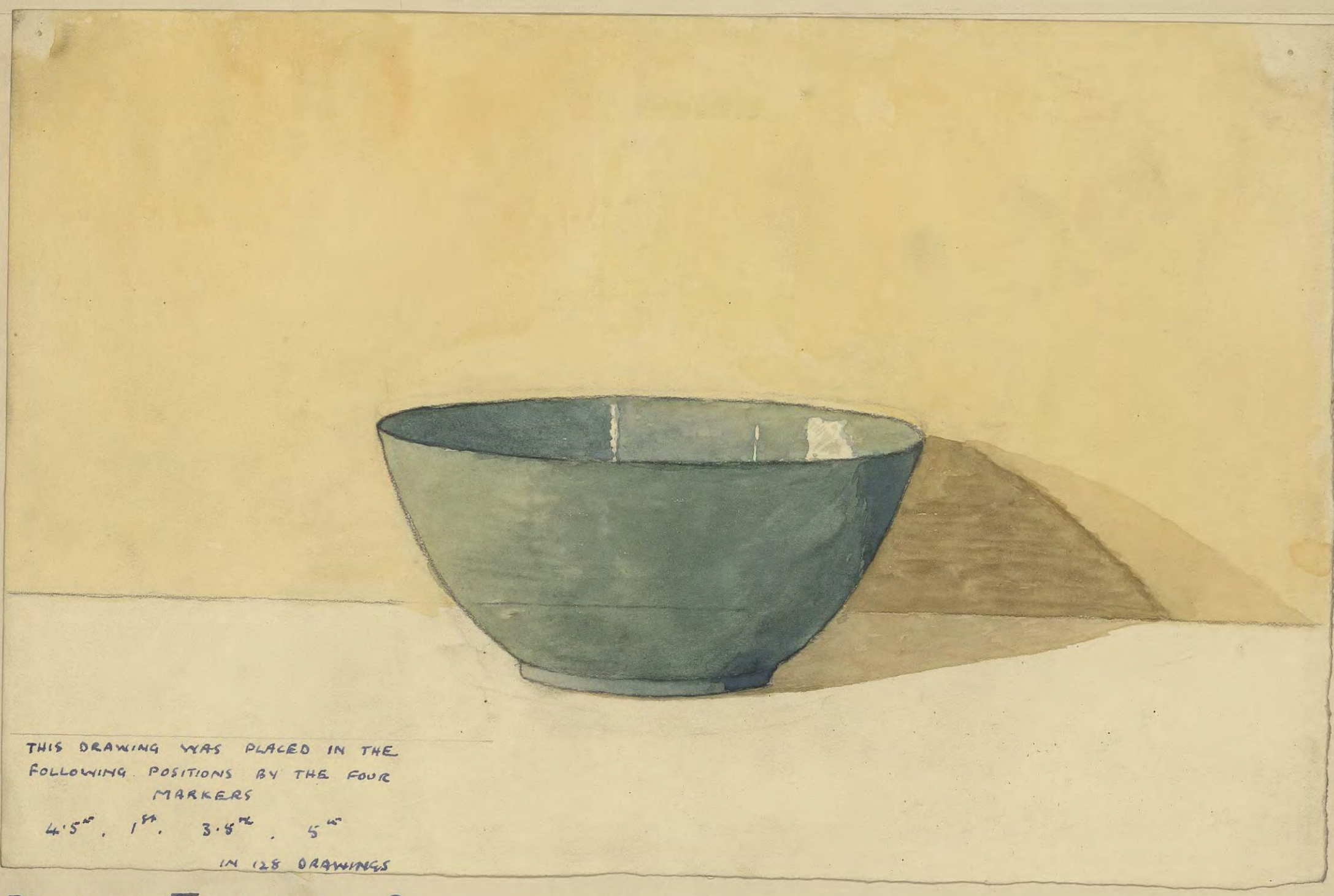
ONE OF THE WORST DRAWINGS.

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

127^{th} . 127^{th} . $126 \cdot 5^{th}$. 126^{th}

IN 128 DRAWINGS





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

4·5th. 1st. 3·8th. 5th

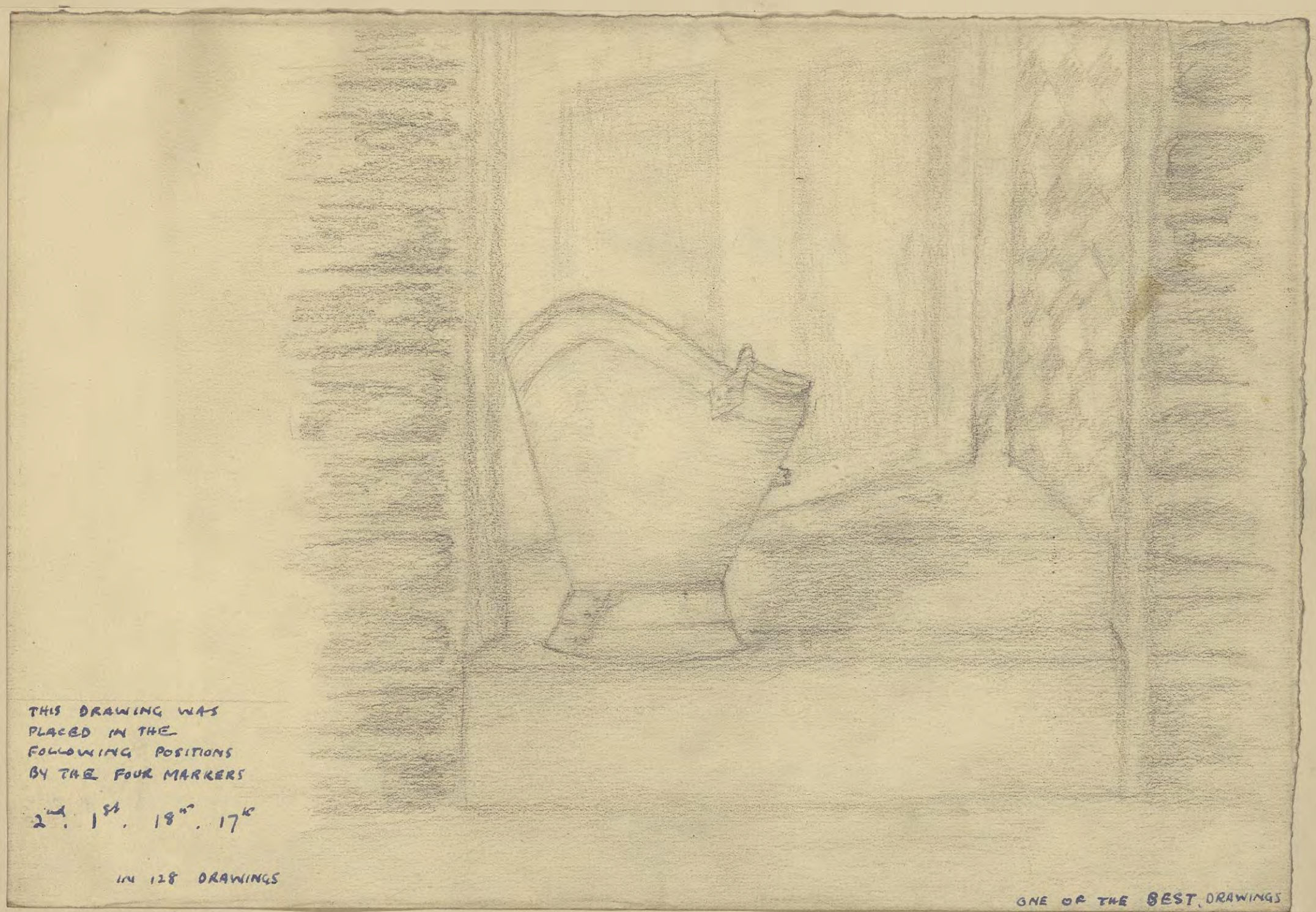
IN 128 DRAWINGS

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.



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

2nd. 1st. 18th. 17th

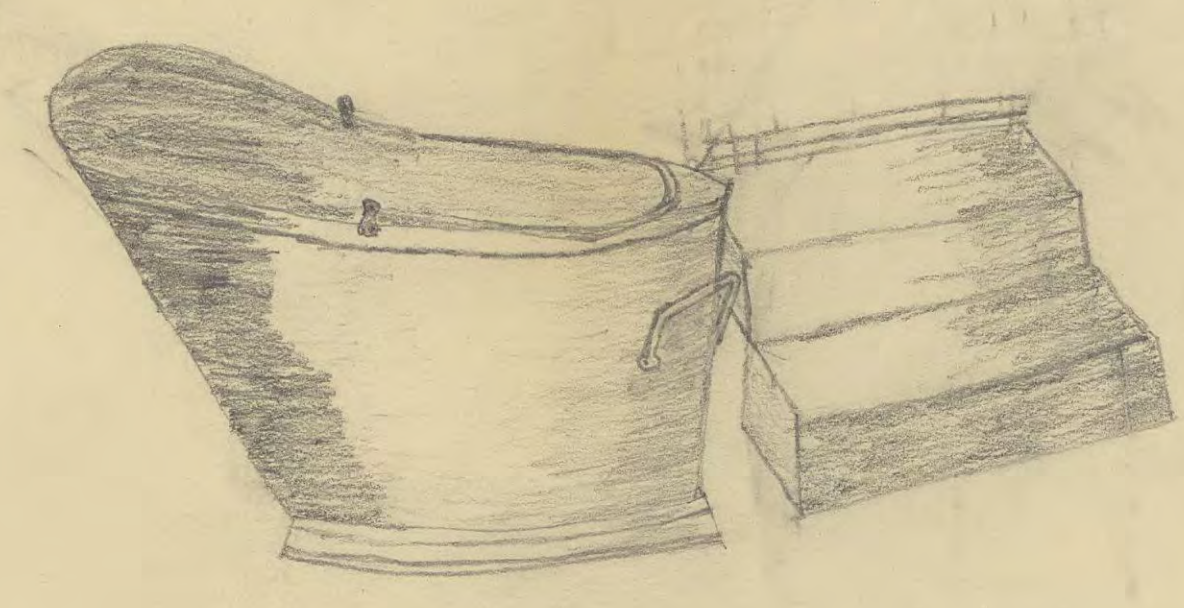
IN 128 DRAWINGS

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 POOR
MARKERS

128th. 127th. 122·5th. 125th

IN 128 DRAWINGS.

	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)
	108	56.5	89	51.5	2652.25	19	361.	(DRAWING)
	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	45	2025·
	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	60·5	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
	102	100	89	2	4·	13	169·
	76	106	5·5	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	102·5	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
	40	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			125,363·		2,242,446·5	

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

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

log 752,178 = 5·8763
log 2,097,000 = 6·3216
log quotient = $\bar{1}$·5547

P = 1 − ·3587

P = ·64

SCHOLASTIC —— INTELLIGENCE

r_2 ·66 ± ·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 quotient = $\bar{1}$·8413.

P = 1 − ·6939

P = ·31

SCHOLASTIC —— 'DRAWING'

r = ·32 ± ·05