

APPENDIX G

Names of student Teachers used for Testing Hypothesis with their Emotional Intelligence Scores (E.Q) and Academic Achievement Scores.

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
1	K1	/ Amane V.P.	219	341	A
2	K2	Attar N.B	249	233	A
3	K3	Bhale M.S.	268	142	S
4	K4	Bhaske S.L.	256	311	A
5	K6	/ Bhosale V.L.	255	302	S
6	K7	/ Chalke N.S.	259	269	A
7	K8	Chavan C.K.	214	391	A
8	K9	/ Chavan S.D.	198	169	C
9	K10	/ Chavan V.S.	197	121	A
10	K11	/ Chougule J.L.	268	327	A
11	K12	/ Deshmukh A.V.	245	334	S
12	K13	Deshpande S.M.	252	222	A
13	K14	Dhale U.C.	227	110	S
14	K15	/ Gadade B.U.	225	187	A
15	K16	/ Gaikwad A.A.	220	305	A
16	K17	Gaikwad D.M.	269	305	S
17	K18	Gahg P.G.	259	266	A
18	K19	/ Ghatage A.A.	261	374	A
19	K20	Gurav G.M.	231	209	S
20	K21	/ Gurav V.H.	278	286	S
21	K22	Gutte K.D.	246	125	S
22	K23	/ Jadhav M.B.	225	274	A
23	K24	Kadam M.N.	259	218	A

*(K- Kharade College of Education, Shivaji Peth ,Kolhapur).

Sr.No	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
24	K26	Kalikate V.M.	266	243	S
25	K27	/ Kamble C.S.	269	365	A
26	K28	Kamble M.V.	224	240	S
27	K29	Kamble P.M.	220	164	C
28	K30	Kamble S.B.	259	337	A
29	K31	Kamble S.M.	234	347	S
30	K32	/ Kambli N.N.	263	282	A
31	K33	/ Khade A.N.	218	166	A
32	K34	/ Kharat V.L.	217	348	A
33	K35	/ Kulkarni S.S.	261	333	S
34	K36	Kumbhar R.R.	271	321	A
35	K37	/ Lagad R.S.	271	423	A
36	K38	/ Lahute M.V.	228	364	A
37	K39	Lakade S.S.	242	257	A
38	K40	/ Mahadik S.J.	262	212	S
39	K41	/ Malage M.D.	266	286	S
40	K42	Mane S.V.	268	309	A
41	K43	/ Mirje S.V.	263	334	A
42	K44	/ Mudkanna S.K.	260	342	S
43	K45	/ Mulla R.S.	267	359	A
44	K46	Nagrah U.R.	241	272	A
45	K47	/ Naik V.V.	266	303	A
46	K48	/ Nalawade P.S.	261	388	S
47	K49	/ Nayakwadi V.P.	237	227	S
48	K50	Panchal D.H.	213	197	A
49	K52	Patil D.B.	226	276	S
50	K53	/Patil K.P.	235	383	A

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
51	K54	/ Patil M.S.	232	306	A
52	K55	Patil N. K.	258	359	S
53	K56	/ Patil S.P.	255	240	A
54	K58	Rajurkar S.B.	248	165	S
55	K59	Rathod S.S.	244	311	A
56	K60	/ Sakhare L.B.	210	176	A
57	K61	/ Samal V.C.	248	Ab	A
58	K62	Sankpal N.B.	258	213	A
59	K63	/ Sankpal A.D.	240	385	A
60	K64	/ Sarangi R.T.	269	292	A
61	K65	Sawant G.D.	254	220	S
62	K66	/ Sheshekar S.V.	224	260	S
63	K68	/ Shinde R.M.	254	297	S
64	K69	Shinde R.N.	259	264	A
65	K70	Shinde S.T.	251	229	S
66	K71	Sutar A.D.	261	263	A
67	K72	Supe N.C.	197	176	S
68	K73	Tambekar S.M.	244	153	S
69	K74	Thorat D.S	220	189	S
70	K77	Torane P.H.	230	269	A
71	K78	Tukshetty P.V.	251	219	S
72	K79	Vardhe D.V.	200	261	C
73	K80	Vidhate V.K.	229	257	A

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
74	R1	Aldar B.N.	201	232	A
75	R2	/ Attar R.A.	239	317	S
76	R3	Aurade A.A.	225	185	S
77	R4	Bhosale B.S.	250	167	S
78	R5	/ Bhosale S.J.	209	348	S
79	R6	/ Bookseller S. A-Q.	261	250	S
80	R7	Borate S.B.	227	308	A
81	R8	/ Borgave A.M.	262	225	S
82	R9	Bawa S.P.	246	108	S
83	R10	Chandanshive S.S.	223	242	S
84	R11	Charwaknila B.S.	243	237	S
85	R12	Choudhari S.N.	222	252	A
86	R13	Choudhari V.V.	220	282	A
87	R14	Chavan A.T.	183	104	A
88	R15	/ Desai A.B.	253	352	A
89	R16	/ Desai S.S.	239	300	A
90	R17	Deshmukh M.M.	246	102	S
91	R18	/ Deshmukh M.B.	222	335	A
92	R19	Dhanwade S.M.	242	327	S
93	R20	/ Dhere D.A.	227	267	A
94	R21	/ Dhumal V.E	207	342	S
95	R22	Dinde R. A-H	256	357	A
96	R24	/ Harale V.M.	219	220	A
97	R25	/ Huparikar S.S.	232	367	A
98	R26	Ingale S.N.	229	257	A

* (R- Chh. Shivaji College of Education , Rukadi)

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
99	R27	Jadhav J.S.	256	362	A
100	R28	/ Jadhav R.L.	217	310	S
101	R29	Jadhav S.S.	196	137	A
102	R30	Jawak S.S.	214	325	A
103	R31	/ Joshi R.B	248	373	A
104	R32	/ Kamate M.A.	192	188	S
105	R33	/ Kamble S.S.	242	310	A
106	R34	Kamble R.A.	255	248	A
107	R35	/ Karandikar S.V.	235	310	S
108	R36	/ Kekan M.M.	227	228	A
109	R38	Khan H.M.	206	230	A
110	R39	/ Kharat V.H.	219	335	A
111	R40	Khochare S.S.	216	313	A
112	R41	/ Kittad R.S.	255	350	A
113	R42	Koli V.A.	244	145	A
114	R43	/ Kumbhar M.S.	236	303	A
115	R44	Kumbhar S.G.	219	82	S
116	R45	Lavhate P.V.	261	240	A
117	R46	Magdum A.V.	257	208	S
118	R47	Mali A.B.	262	187	A
119	R48	Masute S.B.	228	392	A
120	R49	/ Mhabri N.N.	208	238	S
121	R50	More S.N.	202	345	A
122	R51	Naikwad A.B.	257	262	A
123	R52	/ Parmaj V.R.	227	370	S
124	R53	Patil A.C.	194	218	S
125	R54	Patil N.V.	253	317	A

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Scores	Faculty
126	R55	Pathan J.M.	257	335	A
127	R56	/ Peerzade F.M.	237	278	S
128	R57	/ Pendhari A.A.	231	323	A
129	R58	/ Pisal V.A.	234	308	A
130	R59	Pokale A.D.	241	187	A
131	R60	Pol U.N.	176	148	S
132	R61	Rathod B.T.	206	150	S
133	R62	Rathod M.H.	213	212	A
134	R63	Sajane S.N.	257	283	S
135	R64	Sale S.T.	212	253	A
136	R65	Sangule O.T.	250	293	S
137	R66	Sartape M.M.	263	223	S
138	R67	Sawant K.S.	221	182	S
139	R68	Shendage A.D.	216	282	A
140	R69	Shevade A.A.	261	307	S
141	R70	Shikarkhane S.M.	226	190	A
142	R71	/ Shirke R.A.	206	260	S
143	R72	Sorate S.M.	265	233	S
144	R73	/ Tamboli N.G.	255	267	A
145	R74	Teli S.B.	225	277	A
146	R75	Thorve R.S.	212	267	A
147	R76	Vhanwade K.D.	216	267	A
148	R77	Waghmare S.D.	237	310	A
149	R78	Joshi A.A.	225	292	S
150	R79	/ Kesare K.S.	238	255	S
151	R80	Swami D.B.	263	172	S

Sr.No,	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
152	I 1	/ Desai R.R.	215	206	A
153	I 2	/ Ghodake S.H.	243	223	A
154	I 3	/ Malusare A.S.	210	268	A
155	I 4	Bhatmare P.D.	235	236	A
156	I 5	Ghatwade P.R.	216	285	A
157	I 6	Ghodake S.P.	257	195	A
158	I 8	Jadhawar S.P.	231	281	A
159	I 9	Khairnar K.E.	274	304	A
160	I 10	Kharat B.B.	222	207	A
161	I 11	Mane R.H.	255	310	A
162	I 12	Shikalgar S.R.	210	258	A
163	I 13	/ Koli A.P.	208	293	A
164	I 14	Salunkhe D.H.	216	126	A
165	I 15	/ Bhosale V.V.	209	269	A
166	I 16	Birajdar S.I.	243	307	A
167	I 17	/ Chavan S.P.	238	221	A
168	I 18	Chougule M.D.	261	248	A
169	I 19	/ Jamadar J.V.	248	270	A
170	I 20	Kale N.M.	230	237	A
171	I 21	/ Kadale M.V.	204	317	A
172	I 23	Satpute P.A.	218	224	A
173	I 24	/ Budhavale C.M.	250	245	A
174	I 25	/ Kitture S.P.	257	296	A
175	I 26	/ Rokade B.V.	227	202	A
176	I 27	Mane R.P.	197	149	A
177	I 28	Gejage S.S.	237	329	A

*(I- Ichalkaranji College of Education , Ichalkaranji)

Sr.No	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
178	I 29	Jatte S.P.	217	120	A
179	I 30	Kakale A.B.	251	321	A
180	I 31	Magare B.N.	247	261	A
181	I 32	Mujawar M.A.	245	302	A
182	I 33	/ Pujari D.S.	228	295	A
183	I 34	Shinde B.P.	254	342	A
184	I 36	/ Gurav P.H.	260	221	A
185	I 37	/ Hatkar V.M.	230	283	A
186	I 38	/ Khade G.S.	223	221	A
187	I 39	/ Mahanta D.L.	247	238	A
188	I 40	Maskar V.S.	218	345	A
189	I 42	/ Aagare N.B.	209	337	S
190	I 43	Alone R.A.	241	298	S
191	I 44	/ Babar S.B.	250	272	S
192	I 45	/ Bagewadikar M.P.	261	131	S
193	I 48	Chavan V.G.	167	248	C
194	I 49	Karle S.G.	264	220	S
195	I 50	/ Khamkar S.A.	266	266	S
196	I 51	Koli S. V.	246	231	S
197	I 52	/ Kulkarni R.D.	220	229	S
198	I 53	Lambor D.D.	232	276	S
199	I 54	Lande P.K.	231	239	S
200	I 55	More A.N.	207	208	S
201	I 57	Pandav S.V.	243	328	S
202	I 59	/ Patil N.D.	260	340	S
203	I 60	/ Patil V.V.	242	303	S

Sr.No.	Roll.no	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
204	I 61	/ Ronge U.S.	229	187	S
205	I 62	Sawant D.H.	240	178	S
206	I 63	Sawant R.S.	212	285	S
207	I 64	Shaikh Y.M.	223	316	S
208	I 65	Shete P.K.	266	200	S
209	I 66	Shikalgar R.R.	215	231	S
210	I 67	Sontakke U.M.	246	278	S
211	I 68	/ Tavniya S.R.	237	292	C
212	I 69	Teli A.D.	242	335	S
213	I 70	/ Vankudre R.S.	272	326	S
214	I 71	Waghmare A.S.	196	165	S
215	I 72	/ Waghole V.G.	185	226	S
216	I 73	/ Dhole V.A.	248	180	C
217	I 74	/ Kadam D.N.	249	321	S
218	I 75	/ Kumbhar A.V.	252	175	S
219	I 76	Kumbhar Y.S	227	300	S
220	I 77	/ Lad U.Y	248	330	S
221	I 78	/Mane U.V.	203	217	S
222	I 79	Patil R.S.	255	299	S
223	I 80	/ Shirke S.M.	215	264	S
224	G1	/ Achlerkar V.B.	246	321	S
225	G2	Ambasange R.S.	266	380	A

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
226	G3	/ Babar V.K.	247	356	A
227	G4	Bagadi C.R.	218	351	A
228	G5	Bansode N.K.	220	386	A
229	G6	Behebe V.G.	251	404	S
230	G7	/ Bhoir S.K.	232	316	A
231	G8	Bhosale U.U.	231	313	A
232	G9	/ Borate S.A.	223	373	A
233	G10	/ Chavan S.R.	242	391	A
234	G11	Chavan S.P.	177	323	S
235	G12	/ Choudhari L.N.	234	343	A
236	G13	Gaikwad T.P.	220	345	S
237	G14	Gavade J.A.	224	308	S
238	G15	/ Ghodake S.S.	228	349	A
239	G16	Gosavi S.R.	234	372	A
240	G17	Gulvalkar U.V.	241	351	S
241	G18	Gurav N.N.	202	293	S
242	G19	Hange S.P.	237	268	A
243	G20	Habule L.B.	219	351	S
244	G21	Thube A.M.	272	289	S
245	G22	/ Hugare R.M.	261	332	C
246	G23	/ Ingale A.T.	261	347	A
247	G24	/ Jangale M.D.	220	370	A
248	G25	Jadhav S.S.	253	332	S
249	G26	/ Kadam A.N.	229	332	C

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
250	G27	Kale M.T.	250	364	S
251	G28	Kakade S.N.	274	285	C
252	G29	/ Kamble J.E.	259	305	S
253	G30	/ Kanchankoti S.S.	249	345	A
254	G31	Kasture A.M.	232	379	A
255	G32	Khade S.K.	219	214	S
256	G33	/ Khare R.L.	242	285	A
257	G34	Koli S.D.	215	327	A
258	G35	Koli V.L.	257	359	S
259	G36	Kotwal A.K.	250	266	S
260	G37	Kshirsagar S.V.	224	301	S
261	G38	Kudar P.S.	209	342	A
262	G39	Mane J.T.	263	323	A
263	G40	Morbale S.A.	226	379	S
264	G41	/ More K.T.	221	324	A
265	G42	Mule V.M.	233	298	S
266	G43	Naikwade B.C.	228	244	A
267	G44	Navalagi M.M.	251	264	S
268	G45	Nimbalkar C.S.	250	353	S
269	G46	/ Nikam B.J.	261	377	S
270	G47	/ Pathak A.S.	250	313	S
271	G48	Patil D.B.	233	318	S
272	G49	/ Patil N.B.	239	374	A
273	G50	/ Patil –Bhosale R.R.	205	376	S
274	G51	/ Patil R.D.	235	353	S
275	G52	Patil S.V.	214	364	A

Sr.No.	Roll.no.	Name	E.I. Score (E.Q)	Academic achievement Score	Faculty
276	G53	Patil S.L.	252	394	A
277	G54	Patil V.P.	265	361	A
278	G55	Powar D.V.	251	340	A
279	G56	/ Pujari M.B.	242	351	A
280	G57	/ Rukade V.P.	245	320	S
281	G58	/ Sandugade N.M.	242	317	C
282	G59	/ Sankpal S.R.	214	357	A
283	G60	Sanap S.D.	180	374	A
284	G61	Salunke L.B.	256	386	A
285	G62	/ Sankukh M.D.	248	290	A
286	G63	/ Satav S.V.	237	380	A
287	G64	/ Sutar S.H.	233	324	A
288	G65	/ Shakhpure S.S.	239	344	A
289	G66	/ Shinde A.P.	240	375	A
290	G67	Shinde V.P.	245	394	A
291	G68	Shaikh M.B.	227	363	A
292	G69	Suryawanshi H.R.	236	338	A
293	G70	Suryawanshi V.A.	241	362	A
294	G71	Swami S.S.	212	266	S
295	G72	Torane A.A.	189	234	A
296	G73	Vhangutte P.P.	170	410	S
297	G74	/ Waghmode U.B.	242	392	A
298	G75	/ Wali P.S.	245	386	S
299	G76	Ware A.V.	247	320	S
300	G77	Zendekar L.S.	254	334	A
301	G78	Ghule R.G.	239	365	A
302	G79	/ Jadhav K.J.	200	311	A
303	G80	Mane J.S.	255	287	A

*(G- Acharya Jawadekar College of Education ,Gargoti)

* (A- Arts , S-Science , C-Commerce)

/ Indicates Female Student teachers

APPENDIX H

Calculations of Reliability Coefficient:

1. Odds Scores and Evens Scores of the test data prepared for estimating Reliability by Odd-Even method.

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
1	K1	111	108	12321	11664	11988
2	K2	123	126	15129	15876	15498
3	K3	134	134	17956	17956	17956
4	K4	130	126	16900	15876	16380
5	K5	129	126	16641	15876	16254
6	K6	130	129	16900	16641	16770
7	K7	107	107	11449	11449	11449
8	K8	107	91	11449	8281	9737
9	K9	99	98	9801	9604	9702
10	K10	133	135	17689	18225	17955
11	K11	120	125	14400	15625	15000
12	K12	124	128	15376	16384	15872
13	K13	110	117	12100	13689	12870
14	K14	103	122	10609	14884	12566
15	K15	116	104	13456	10816	12064
16	K16	131	138	17161	19044	18078
17	K17	132	127	17424	16129	16764
18	K18	126	135	15876	18225	17010
19	K19	116	115	13456	13225	13340
20	K20	139	139	19321	19321	19321
21	K21	123	123	15129	15129	15129
22	K22	111	114	12321	12996	12654
23	K23	128	131	16384	17161	16768
24	K24	127	139	16129	19321	17653
25	K25	132	137	17424	18769	18084
26	K26	113	111	12769	12321	12543
27	K27	109	111	11881	12321	12099
28	K28	126	133	15876	17689	16758

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x	y ²	xy
29	K29	114	120	12996	14400	13680
30	K30	130	133	16900	17689	17290
31	K31	109	109	11881	11881	11881
32	K32	108	109	11664	11881	11772
33	K33	125	136	15625	18496	17000
34	K34	133	138	17689	19044	18354
35	K35	135	136	18225	18496	18360
36	K36	117	111	13689	12321	12987
37	K37	126	116	15876	13456	14616
38	K38	133	129	17689	16641	17157
39	K39	135	131	18225	17161	17685
40	K40	129	139	16641	19321	17931
41	K41	126	137	15876	18769	17262
42	K42	125	135	15625	18225	16875
43	K43	131	136	17161	18496	17816
44	K44	123	118	15129	13924	14514
45	K45	132	134	17424	17956	17688
46	K46	129	132	16641	17424	17028
47	K47	119	128	14161	16384	15232
48	K48	105	108	11025	11664	11340
49	K49	112	114	12544	12996	12768
50	K50	114	121	12996	14641	13794
51	K51	115	117	13225	13689	13455
52	K52	126	132	15876	17424	16632
53	K53	130	125	16900	15625	16250
54	K54	118	130	13924	16900	15340
55	K55	122	122	14884	14884	14884
56	K56	105	105	11025	11025	11025
57	K57	123	125	15129	15625	15375
58	K58	130	128	16900	16384	16640
59	K59	122	118	14884	13924	14396
60	K60	132	137	17424	18769	18084

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
61	K61	126	128	15876	16384	16128
62	K62	110	114	12100	12996	12540
63	K63	126	128	15876	16384	16128
64	K64	125	134	15625	17956	16750
65	K65	125	126	15625	15876	15750
66	K66	131	130	17161	16900	17030
67	K67	92	105	8464	11025	9660
68	K68	115	129	13225	16641	14835
69	K69	99	121	9801	14641	11979
70	K70	110	120	12100	14400	13200
71	K71	128	123	16384	15129	15744
72	K72	95	105	9025	11025	9975
73	K73	115	114	13225	12996	13110
74	I1	98	117	9604	13689	11466
75	I2	114	129	12996	16641	14706
76	I3	112	98	12544	9604	10976
77	I4	111	124	12321	15376	13764
78	I5	99	117	9801	13689	11583
79	I6	127	130	16129	16900	16510
80	I7	115	116	13225	13456	13340
81	I8	134	140	17956	19600	18760
82	I9	114	108	12996	11664	12312
83	I10	124	131	15376	17161	16244
84	I11	97	113	9409	12769	10961
85	I12	97	111	9409	12321	10767
86	I13	109	107	11881	11449	11663
87	I14	100	109	10000	11881	10900
88	I15	112	131	12544	17161	14672
89	I16	113	125	12769	15625	14125
90	I17	133	128	17689	16384	17024
91	I18	122	126	14884	15876	15372
92	I19	111	119	12321	14161	13209

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
93	I20	101	103	10201	10609	10403
94	I21	109	109	11881	11881	11881
95	I22	123	127	15129	16129	15621
96	I23	132	125	17424	15625	16500
97	I24	115	112	13225	12544	12880
98	I25	105	92	11025	8464	9660
99	I26	115	122	13225	14884	14030
100	I27	103	114	10609	12996	11742
101	I28	123	128	15129	16384	15744
102	I29	123	124	15129	15376	15252
103	I30	118	127	13924	16129	14986
104	I31	112	116	12544	13456	12992
105	I32	123	131	15129	17161	16113
106	I33	129	131	16641	17161	16899
107	I34	114	116	12996	13456	13224
108	I35	113	110	12769	12100	12430
109	I36	120	127	14400	16129	15240
110	I37	109	109	11881	11881	11881
111	I38	105	104	11025	10816	10920
112	I39	123	118	15129	13924	14514
113	I40	123	127	15129	16129	15621
114	I41	128	133	16384	17689	17024
115	I42	86	81	7396	6561	6966
116	I43	134	130	17956	16900	17420
117	I44	128	138	16384	19044	17664
118	I45	121	125	14641	15625	15125
119	I46	116	104	13456	10816	12064
120	I47	117	115	13689	13225	13455
121	I48	113	118	12769	13924	13334
122	I49	98	109	9604	11881	10682
123	I50	120	123	14400	15129	14760
124	I51	131	129	17161	16641	16899

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
125	I52	125	117	15625	13689	14625
126	I53	111	118	12321	13924	13098
127	I54	115	125	13225	15625	14375
128	I55	105	107	11025	11449	11235
129	I56	113	110	12769	12100	12430
130	I57	130	136	16900	18496	17680
131	I58	112	103	12544	10609	11536
132	I59	127	119	16129	14161	15113
133	I60	120	117	14400	13689	14040
134	I61	120	122	14400	14884	14640
135	I62	134	138	17956	19044	18492
136	I63	93	103	8649	10609	9579
137	I64	98	87	9604	7569	8526
138	I65	123	125	15129	15625	15375
139	I66	125	124	15625	15376	15500
140	I67	130	122	16900	14884	15860
141	I68	112	115	12544	13225	12880
142	I69	124	124	15376	15376	15376
143	I70	107	96	11449	9216	10272
144	I71	127	128	16129	16384	16256
145	I72	111	104	12321	10816	11544
146	R1	96	105	9216	11025	10080
147	R2	119	120	14161	14400	14280
148	R3	110	115	12100	13225	12650
149	R4	132	118	17424	13924	15576
150	R5	111	98	12321	9604	10878
151	R6	132	129	17424	16641	17028
152	R7	116	111	13456	12321	12876
153	R8	134	128	17956	16384	17152
154	R9	117	129	13689	16641	15093
155	R10	107	116	11449	13456	12412
156	R11	119	124	14161	15376	14756

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
157	R12	106	116	11236	13456	12296
158	R13	109	111	11881	12321	12099
159	R14	93	90	8649	8100	8370
160	R15	125	128	15625	16384	16000
161	R16	116	123	13456	15129	14268
162	R17	117	129	13689	16641	15093
163	R18	119	103	14161	10609	12257
164	R19	117	125	13689	15625	14625
165	R20	110	117	12100	13689	12870
166	R21	105	102	11025	10404	10710
167	R22	118	138	13924	19044	16284
168	R23	113	106	12769	11236	11978
169	R24	111	121	12321	14641	13431
170	R25	121	108	14641	11664	13068
171	R26	131	125	17161	15625	16375
172	R27	104	113	10816	12769	11752
173	R28	104	92	10816	8464	9568
174	R29	110	104	12100	10816	11440
175	R30	115	133	13225	17689	15295
176	R31	95	97	9025	9409	9215
177	R32	119	123	14161	15129	14637
178	R33	130	125	16900	15625	16250
179	R34	111	124	12321	15376	13764
180	R35	115	112	13225	12544	12880
181	R36	102	104	10404	10816	10608
182	R37	111	108	12321	11664	11988
183	R38	102	114	10404	12996	11628
184	R39	122	133	14884	17689	16226
185	R40	119	125	14161	15625	14875
186	R41	111	125	12321	15625	13875
187	R42	106	113	11236	12769	11978
188	R43	130	131	16900	17161	17030

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
189	R44	125	132	15625	17424	16500
190	R45	133	129	17689	16641	17157
191	R46	120	108	14400	11664	12960
192	R47	98	110	9604	12100	10780
193	R48	102	100	10404	10000	10200
194	R49	125	132	15625	17424	16500
195	R50	111	116	12321	13456	12876
196	R51	94	100	8836	10000	9400
197	R52	126	127	15876	16129	16002
198	R53	124	133	15376	17689	16492
199	R54	116	121	13456	14641	14036
200	R55	115	116	13225	13456	13340
201	R56	121	113	14641	12769	13673
202	R57	122	119	14884	14161	14518
203	R58	86	90	7396	8100	7740
204	R59	98	108	9604	11664	10584
205	R60	108	105	11664	11025	11340
206	R61	125	132	15625	17424	16500
207	R62	104	108	10816	11664	11232
208	R63	123	127	15129	16129	15621
209	R64	128	135	16384	18225	17280
210	R65	109	112	11881	12544	12208
211	R66	103	113	10609	12769	11639
212	R67	129	132	16641	17424	17028
213	R68	109	117	11881	13689	12753
214	R69	117	89	13689	7921	10413
215	R70	125	140	15625	19600	17500
216	R71	125	130	15625	16900	16250
217	R72	115	110	13225	12100	12650
218	R73	107	105	11449	11025	11235
219	R74	103	113	10609	12769	11639
220	R75	122	115	14884	13225	14030

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
221	R76	114	111	12996	12321	12654
222	R77	118	120	13924	14400	14160
223	R78	132	131	17424	17161	17292
224	G1	119	127	14161	16129	15113
225	G2	135	131	18225	17161	17685
226	G3	124	123	15376	15129	15252
227	G4	105	113	11025	12769	11865
228	G5	107	113	11449	12769	12091
229	G6	117	134	13689	17956	15678
230	G7	114	118	12996	13924	13452
231	G8	120	111	14400	12321	13320
232	G9	114	109	12996	11881	12426
233	G10	121	121	14641	14641	14641
234	G11	85	92	7225	8464	7820
235	G12	116	118	13456	13924	13688
236	G13	114	106	12996	11236	12084
237	G14	119	105	14161	11025	12495
238	G15	115	113	13225	12769	12995
239	G16	115	119	13225	14161	13685
240	G17	126	115	15876	13225	14490
241	G18	104	98	10816	9604	10192
242	G19	116	121	13456	14641	14036
243	G20	105	114	11025	12996	11970
244	G21	136	136	18496	18496	18496
245	G22	128	133	16384	17689	17024
246	G23	125	136	15625	18496	17000
247	G24	114	106	12996	11236	12084
248	G25	125	128	15625	16384	16000
249	G26	107	122	11449	14884	13054
250	G27	125	125	15625	15625	15625
251	G28	139	135	19321	18225	18765
252	G29	127	132	16129	17424	16764

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
253	G30	128	121	16384	14641	15488
254	G31	111	121	12321	14641	13431
255	G32	110	109	12100	11881	11990
256	G33	116	126	13456	15876	14616
257	G34	103	112	10609	12544	11536
258	G35	126	131	15876	17161	16506
259	G36	126	124	15876	15376	15624
260	G37	101	123	10201	15129	12423
261	G38	105	104	11025	10816	10920
262	G39	125	138	15625	19044	17250
263	G40	107	119	11449	14161	12733
264	G41	110	111	12100	12321	12210
265	G42	125	108	15625	11664	13500
266	G43	108	120	11664	14400	12960
267	G44	129	122	16641	14884	15738
268	G45	122	128	14884	16384	15616
269	G46	126	135	15876	18225	17010
270	G47	124	126	15376	15876	15624
271	G48	114	119	12996	14161	13566
272	G49	118	121	13924	14641	14278
273	G50	95	110	9025	12100	10450
274	G51	112	123	12544	15129	13776
275	G52	112	102	12544	10404	11424
276	G53	123	129	15129	16641	15867
277	G54	133	132	17689	17424	17556
278	G55	128	123	16384	15129	15744
279	G56	121	121	14641	14641	14641
280	G57	121	124	14641	15376	15004
281	G58	122	120	14884	14400	14640
282	G59	105	109	11025	11881	11445
283	G60	83	97	6889	9409	8051
284	G61	124	132	15376	17424	16368

Sr. No.	Roll No.	Even Scores x	Odd Scores y	x^2	y^2	xy
285	G62	124	124	15376	15376	15376
286	G63	111	126	12321	15876	13986
287	G64	124	109	15376	11881	13516
288	G65	122	117	14884	13689	14274
289	G66	119	121	14161	14641	14399
290	G67	116	129	13456	16641	14964
291	G68	111	116	12321	13456	12876
292	G69	108	128	11664	16384	13824
293	G70	114	127	12996	16129	14478
294	G71	112	100	12544	10000	11200
295	G72	92	97	8464	9409	8924
296	G73	87	83	7569	6889	7221
297	G74	110	132	12100	17424	14520
298	G75	119	126	14161	15876	14994
299	G76	125	122	15625	14884	15250
300	G77	122	132	14884	17424	16104
301	G78	116	123	13456	15129	14268
302	G79	101	99	10201	9801	9999
303	G80	127	128	16129	16384	16256
Total		35385	36154	4169407	4356816	4252814

* K- Kharade College of Education, Shivaji Peth ,Kolhapur.

* R-Chh.Shivaji College of Education ,Rukadi .

* I- Ichalkaranji College of Education , Ichalkaranji .

* G- Acharya Jawadekar College of Education ,Gargoti.

Calculation of r from row scores when Deviation are taken from zero:

$$r = \frac{\sum xy - NM_x M_y}{\sqrt{[\sum x^2 - NM_x^2][\sum y^2 - NM_y^2]}}$$

Where ,

x, y = Obtained score.

M_x, M_y = Mean of the x and y series.

$\sum x^2$ and $\sum y^2$ = The sums of the squared x and y values.

N = No. of the cases.

$$r = \frac{4252814 - (303 \times 116.78 \times 119.32)}{\sqrt{[4169407 - 303 \times (116.78)^2][4356816 - 303 \times (119.32)^2]}}$$

$$r = \frac{4252814 - [4222059.4]}{\sqrt{[4169407 - 4132183.2][4356816 - 4313890.5]}}$$

$$r = \frac{30754.55}{\sqrt{(37223.78)}\sqrt{(42925.49)}}$$

$$r = \frac{30754.55}{39973.10}$$

$$r = 0.77$$

Spearman-Brown prophecy formula for estimating reliability from two comparable halves of a test:

$$r_{11} = \frac{2r_{\frac{1}{2} \text{ I}}}{1 + r_{\frac{1}{2} \text{ I}}}$$

r_{11} = reliability coefficient of the whole test

$r_{\frac{1}{2} \text{ I}}$ = reliability coefficients of the half test

$$r_{11} = \frac{2 \times 0.77}{1 + 0.77}$$

$$r_{11} = 0.87$$

**2. Odds scores and Evens scores of the Test Data prepared for
Estimating Reliability by the Rulon and Flanagan Methods.**

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
1	K1	111	108	3	9	219	47961
2	K2	123	126	-3	9	249	62001
3	K3	134	134	0	0	268	71824
4	K4	130	126	4	16	256	65536
5	K5	129	126	3	9	255	65025
6	K6	130	129	1	1	259	67081
7	K7	107	107	0	0	214	45796
8	K8	107	91	16	256	198	39204
9	K9	99	98	1	1	197	38809
10	K10	133	135	-2	4	268	71824
11	K11	120	125	-5	25	245	60025
12	K12	124	128	-4	16	252	63504
13	K13	110	117	-7	49	227	51529
14	K14	103	122	-19	361	225	50625
15	K15	116	104	12	144	220	48400
16	K16	131	138	-7	49	269	72361
17	K17	132	127	5	25	259	67081
18	K18	126	135	-9	81	261	68121
19	K19	116	115	1	1	231	53361
20	K20	139	139	0	0	278	77284
21	K21	123	123	0	0	246	60516
22	K22	111	114	-3	9	225	50625
23	K23	128	131	-3	9	259	67081
24	K24	127	139	-12	144	266	70756

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
25	K25	132	137	-5	25	269	72361
26	K26	113	111	2	4	224	50176
27	K27	109	111	-2	4	220	48400
28	K28	126	133	-7	49	259	67081
29	K29	114	120	-6	36	234	54756
30	K30	130	133	-3	9	263	69169
31	K31	109	109	0	0	218	47524
32	K32	108	109	-1	1	217	47089
33	K33	125	136	-11	121	261	68121
34	K34	133	138	-5	25	271	73441
35	K35	135	136	-1	1	271	73441
36	K36	117	111	6	36	228	51984
37	K37	126	116	10	100	242	58564
38	K38	133	129	4	16	262	68644
39	K39	135	131	4	16	266	70756
40	K40	129	139	-10	100	268	71824
41	K41	126	137	-11	121	263	69169
42	K42	125	135	-10	100	260	67600
43	K43	131	136	-5	25	267	71289
44	K44	123	118	5	25	241	58081
45	K45	132	134	-2	4	266	70756
46	K46	129	132	-3	9	261	68121
47	K47	119	128	-9	81	247	61009
48	K48	105	108	-3	9	213	45369

Sr.No	Roll No.	Oddscores (x_o)	Evenscores (x_e)	$(x_o - x_e)$ d	d^2	$(x_o + x_e)$ x_t	x_t^2
49	K49	112	114	-2	4	226	51076
50	K50	114	121	-7	49	235	55225
51	K51	115	117	-2	4	232	53824
52	K52	126	132	-6	36	258	66564
53	K53	130	125	5	25	255	65025
54	K54	118	130	-12	144	248	61504
55	K55	122	122	0	0	244	59536
56	K56	105	105	0	0	210	44100
57	K57	123	125	-2	4	248	61504
58	K58	130	128	2	4	258	66564
59	K59	122	118	4	16	240	57600
60	K60	132	137	-5	25	269	72361
61	K61	126	128	-2	4	254	64516
62	K62	110	114	-4	16	224	50176
63	K63	126	128	-2	4	254	64516
64	K64	125	134	-9	81	259	67081
65	K65	125	126	-1	1	251	63001
66	K66	131	130	1	1	261	68121
67	K67	92	105	-13	169	197	38809
68	K68	115	129	-14	196	244	59536
69	K69	99	121	-22	484	220	48400
70	K70	110	120	-10	100	230	52900
71	K71	128	123	5	25	251	63001
72	K72	95	105	-10	100	200	40000
73	K73	115	114	1	1	229	52441

Sr.No	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
74	R1	96	105	-9	81	201	40401
75	R2	119	120	-1	1	239	57121
76	R3	110	115	-5	25	225	50625
77	R4	132	118	14	196	250	62500
78	R5	111	98	13	169	209	43681
79	R6	132	129	3	9	261	68121
80	R7	116	111	5	25	227	51529
81	R8	134	128	6	36	262	68644
82	R9	117	129	-12	144	246	60516
83	R10	107	116	-9	81	223	49729
84	R11	119	124	-5	25	243	59049
85	R12	106	116	-10	100	222	49284
86	R13	109	111	-2	4	220	48400
87	R14	93	90	3	9	183	33489
88	R15	125	128	-3	9	253	64009
89	R16	116	123	-7	49	239	57121
90	R17	117	129	-12	144	246	60516
91	R18	119	103	16	256	222	49284
92	R19	117	125	-8	64	242	58564
93	R20	110	117	-7	49	227	51529
94	R21	105	102	3	9	207	42849
95	R22	118	138	-20	400	256	65536
96	R23	113	106	7	49	219	47961
97	R24	111	121	-10	100	232	53824
98	R25	121	108	13	169	229	52441
99	R26	131	125	6	36	256	65536
100	R27	104	113	-9	81	217	47089

Sr. No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	$(x_o - x_e)$ d	d^2	$(x_o + x_e)$ x_t	x_t^2
101	R28	104	92	12	144	196	38416
102	R29	110	104	6	36	214	45796
103	R30	115	133	-18	324	248	61504
104	R31	95	97	-2	4	192	36864
105	R32	119	123	-4	16	242	58564
106	R33	130	125	5	25	255	65025
107	R34	111	124	-13	169	235	55225
108	R35	115	112	3	9	227	51529
109	R36	102	104	-2	4	206	42436
110	R37	111	108	3	9	219	47961
111	R38	102	114	-12	144	216	46656
112	R39	122	133	-11	121	255	65025
113	R40	119	125	-6	36	244	59536
114	R41	111	125	-14	196	236	55696
115	R42	106	113	-7	49	219	47961
116	R43	130	131	-1	1	261	68121
117	R44	125	132	-7	49	257	66049
118	R45	133	129	4	16	262	68644
119	R46	120	108	12	144	228	51984
120	R47	98	110	-12	144	208	43264
121	R48	102	100	2	4	202	40804
122	R49	125	132	-7	49	257	66049
123	R50	111	116	-5	25	227	51529
124	R51	94	100	-6	36	194	37636
125	R52	126	127	-1	1	253	64009
126	R53	124	133	-9	81	257	66049
127	R54	116	121	-5	25	237	56169

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
128	R55	115	116	-1	1	231	53361
129	R56	121	113	8	64	234	54756
130	R57	122	119	3	9	241	58081
131	R58	86	90	-4	16	176	30976
132	R59	98	108	-10	100	206	42436
133	R60	108	105	3	9	213	45369
134	R61	125	132	-7	49	257	66049
135	R62	104	108	-4	16	212	44944
136	R63	123	127	-4	16	250	62500
137	R64	128	135	-7	49	263	69169
138	R65	109	112	-3	9	221	48841
139	R66	103	113	-10	100	216	46656
140	R67	129	132	-3	9	261	68121
141	R68	109	117	-8	64	226	51076
142	R69	117	89	28	784	206	42436
143	R70	125	140	-15	225	265	70225
144	R71	125	130	-5	25	255	65025
145	R72	115	110	5	25	225	50625
146	R73	107	105	2	4	212	44944
147	R74	103	113	-10	100	216	46656
148	R75	122	115	7	49	237	56169
149	R76	114	111	3	9	225	50625
150	R77	118	120	-2	4	238	56644
151	R78	132	131	1	1	263	69169

Sr.No	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
152	I1	98	117	-19	361	215	46225
153	I2	114	129	-15	225	243	59049
154	I3	112	98	14	196	210	44100
155	I4	111	124	-13	169	235	55225
156	I5	99	117	-18	324	216	46656
157	I6	127	130	-3	9	257	66049
158	I7	115	116	-1	1	231	53361
159	I8	134	140	-6	36	274	75076
160	I9	114	108	6	36	222	49284
161	I10	124	131	-7	49	255	65025
162	I11	97	113	-16	256	210	44100
163	I12	97	111	-14	196	208	43264
164	I13	109	107	2	4	216	46656
165	I14	100	109	-9	81	209	43681
166	I15	112	131	-19	361	243	59049
167	I16	113	125	-12	144	238	56644
168	I17	133	128	5	25	261	68121
169	I18	122	126	-4	16	248	61504
170	I19	111	119	-8	64	230	52900
171	I20	101	103	-2	4	204	41616
172	I21	109	109	0	0	218	47524
173	I22	123	127	-4	16	250	62500
174	I23	132	125	7	49	257	66049
175	I24	115	112	3	9	227	51529
176	I25	105	92	13	169	197	38809
177	I26	115	122	-7	49	237	56169

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
178	I27	103	114	-11	121	217	47089
179	I28	123	128	-5	25	251	63001
180	I29	123	124	-1	1	247	61009
181	I30	118	127	-9	81	245	60025
182	I31	112	116	-4	16	228	51984
183	I32	123	131	-8	64	254	64516
184	I33	129	131	-2	4	260	67600
185	I34	114	116	-2	4	230	52900
186	I35	113	110	3	9	223	49729
187	I36	120	127	-7	49	247	61009
188	I37	109	109	0	0	218	47524
189	I38	105	104	1	1	209	43681
190	I39	123	118	5	25	241	58081
191	I40	123	127	-4	16	250	62500
192	I41	128	133	-5	25	261	68121
193	I42	86	81	5	25	167	27889
194	I43	134	130	4	16	264	69696
195	I44	128	138	-10	100	266	70756
196	I45	121	125	-4	16	246	60516
197	I46	116	104	12	144	220	48400
198	I47	117	115	2	4	232	53824
199	I48	113	118	-5	25	231	53361
200	I49	98	109	-11	121	207	42849
201	I50	120	123	-3	9	243	59049
202	I51	131	129	2	4	260	67600
203	I52	125	117	8	64	242	58564

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	$(x_o - x_e)$ d	d^2	$(x_o + x_e)$ x_t	x_t^2
204	I53	111	118	-7	49	229	52441
205	I54	115	125	-10	100	240	57600
206	I55	105	107	-2	4	212	44944
207	I56	113	110	3	9	223	49729
208	I57	130	136	-6	36	266	70756
209	I58	112	103	9	81	215	46225
210	I59	127	119	8	64	246	60516
211	I60	120	117	3	9	237	56169
212	I61	120	122	-2	4	242	58564
213	I62	134	138	-4	16	272	73984
214	I63	93	103	-10	100	196	38416
215	I64	98	87	11	121	185	34225
216	I65	123	125	-2	4	248	61504
217	I66	125	124	1	1	249	62001
218	I67	130	122	8	64	252	63504
219	I68	112	115	-3	9	227	51529
220	I69	124	124	0	0	248	61504
221	I70	107	96	11	121	203	41209
222	I71	127	128	-1	1	255	65025
223	I72	111	104	7	49	215	46225
224	G1	119	127	-8	64	246	60516
225	G2	135	131	4	16	266	70756
226	G3	124	123	1	1	247	61009
227	G4	105	113	-8	64	218	47524
228	G5	107	113	-6	36	220	48400
229	G6	117	134	-17	289	251	63001
230	G7	114	118	-4	16	232	53824

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
231	G8	120	111	9	81	231	53361
232	G9	114	109	5	25	223	49729
233	G10	121	121	0	0	242	58564
234	G11	85	92	-7	49	177	31329
235	G12	116	118	-2	4	234	54756
236	G13	114	106	8	64	220	48400
237	G14	119	105	14	196	224	50176
238	G15	115	113	2	4	228	51984
239	G16	115	119	-4	16	234	54756
240	G17	126	115	11	121	241	58081
241	G18	104	98	6	36	202	40804
242	G19	116	121	-5	25	237	56169
243	G20	105	114	-9	81	219	47961
244	G21	136	136	0	0	272	73984
245	G22	128	133	-5	25	261	68121
246	G23	125	136	-11	121	261	68121
247	G24	114	106	8	64	220	48400
248	G25	125	128	-3	9	253	64009
249	G26	107	122	-15	225	229	52441
250	G27	125	125	0	0	250	62500
251	G28	139	135	4	16	274	75076
252	G29	127	132	-5	25	259	67081
253	G30	128	121	7	49	249	62001
254	G31	111	121	-10	100	232	53824
255	G32	110	109	1	1	219	47961
256	G33	116	126	-10	100	242	58564
257	G34	103	112	-9	81	215	46225
258	G35	126	131	-5	25	257	66049
259	G36	126	124	2	4	250	62500

Sr. No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	$(x_o - x_e)$ d	d^2	$(x_o + x_e)$ x_t	x_t^2
260	G37	101	123	-22	484	224	50176
261	G38	105	104	1	1	209	43681
262	G39	125	138	-13	169	263	69169
263	G40	107	119	-12	144	226	51076
264	G41	110	111	-1	1	221	48841
265	G42	125	108	17	289	233	54289
266	G43	108	120	-12	144	228	51984
267	G44	129	122	7	49	251	63001
268	G45	122	128	-6	36	250	62500
269	G46	126	135	-9	81	261	68121
270	G47	124	126	-2	4	250	62500
271	G48	114	119	-5	25	233	54289
272	G49	118	121	-3	9	239	57121
273	G50	95	110	-15	225	205	42025
274	G51	112	123	-11	121	235	55225
275	G52	112	102	10	100	214	45796
276	G53	123	129	-6	36	252	63504
277	G54	133	132	1	1	265	70225
278	G55	128	123	5	25	251	63001
279	G56	121	121	0	0	242	58564
280	G57	121	124	-3	9	245	60025
281	G58	122	120	2	4	242	58564
282	G59	105	109	-4	16	214	45796
283	G60	83	97	-14	196	180	32400
284	G61	124	132	-8	64	256	65536
285	G62	124	124	0	0	248	61504
286	G63	111	126	-15	225	237	56169
287	G64	124	109	15	225	233	54289
288	G65	122	117	5	25	239	57121
289	G66	119	121	-2	4	240	57600
290	G67	116	129	-13	169	245	60025

Sr.No.	Roll No.	Odd scores (x_o)	Even scores (x_e)	($x_o - x_e$) d	d^2	($x_o + x_e$) x_t	x_t^2
291	G68	111	116	-5	25	227	51529
292	G69	108	128	-20	400	236	55696
293	G70	114	127	-13	169	241	58081
294	G71	112	100	12	144	212	44944
295	G72	92	97	-5	25	189	35721
296	G73	87	83	4	16	170	28900
297	G74	110	132	-22	484	242	58564
298	G75	119	126	-7	49	245	60025
299	G76	125	122	3	9	247	61009
300	G77	122	132	-10	100	254	64516
301	G78	116	123	-7	49	239	57121
302	G79	101	99	2	4	200	40000
303	G80	127	128	-1	1	255	65025
Total		35385	36154	-769	20595	71539	17031851

Rulons Method :

A shortcut method for estimating test reliability from scores on split-halves of a test has been proposed by rulon. He gave the formula ,

$$r = 1 - \frac{\sigma_d^2}{\sigma_s^2}$$

σ_d^2 = The variance of the differences between the half test score.

σ_s^2 = The variance of the sum of the half test scores.

Standard deviation (σ) from the original measures or scores:

$$\sigma = \sqrt{\frac{\sum X^2}{N} - M^2}$$

M= Mean

N= No. of students

$\sum X^2$ = Sum of the square of each score.

$$1] \quad \sum d = -769$$

$$\sum d^2 = 20595$$

$$N = 303$$

$$\therefore M = -2.54$$

$$\sigma = \sqrt{\frac{20595}{303} - (-2.54)^2}$$

$$\sigma = \sqrt{61.52}$$

$$\therefore \sigma^2 = 61.52$$

$$2] \quad \sum X_i = 71,539$$

$$\sum X_i^2 = 1,70,31,851$$

$$N = 303$$

$$\therefore M = 236.10$$

$$\sigma = \sqrt{\frac{17031851}{303} - (236.10)^2}$$

$$\sigma = \sqrt{467.52}$$

$$\therefore \sigma^2 = 467.52$$

$$\begin{aligned}
 r &= 1 - \frac{\sigma_d^2}{\sigma_s^2} \\
 &= 1 - \frac{61.52}{467.52} \\
 &= 1 - 0.13 \\
 r &= 0.87
 \end{aligned}$$

Flanagan Formula:

$$r_{tt} = 2 \left(1 - \frac{\sigma_1^2 + \sigma_2^2}{\sigma_t^2} \right)$$

σ_1, σ_2 = The SD's of the two halves.

$$1] \Sigma X = 35385 \qquad \Sigma X^2 = 4169407$$

$$N = 303$$

$$\therefore M = 116.78$$

$$\sigma = \sqrt{\frac{4169407}{303} - (116.78)^2}$$

$$\sigma = \sqrt{122.85}$$

$$\therefore \sigma^2 = 122.85$$

$$2] \Sigma Y = 36154 \qquad \Sigma Y^2 = 4356816$$

$$N = 303$$

$$\therefore M = 119.32$$

$$\sigma = \sqrt{\frac{4356816}{303} - (119.32)^2}$$

$$\sigma = \sqrt{141.67}$$

$$\therefore \sigma^2 = 141.67$$

$$r_{tt} = 2 \left(1 - \frac{122.85 + 141.64}{467.52} \right)$$

$$r_{tt} = 2(1-0.57)$$

$$r_{tt} = 0.86$$

APPENDIX I

Calculation of the coefficient of Correlation By the Product-Moment method.

1. Correlation between E.I.Score (E.Q.) and Academic achievement score of student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K1	219	341	47961	116281	74679
2	K2	249	233	62001	54289	58017
3	K3	268	142	71824	20164	38056
4	K4	256	311	65536	96721	79616
5	K6	255	302	65025	91204	77010
6	K7	259	269	67081	72361	69671
7	K8	214	391	45796	152881	83674
8	K9	198	169	39204	28561	33462
9	K10	197	121	38809	14641	23837
10	K11	268	327	71824	106929	87636
11	K12	245	334	60025	111556	81830
12	K13	252	222	63504	49284	55944
13	K14	227	110	51529	12100	24970
14	K15	225	187	50625	34969	42075
15	K16	220	305	48400	93025	67100
16	K17	269	305	72361	93025	82045
17	K18	259	266	67081	70756	68894
18	K19	261	374	68121	139876	97614
19	K20	231	209	53361	43681	48279
20	K21	278	286	77284	81796	79508
21	K22	246	125	60516	15625	30750
22	K23	225	274	50625	75076	61650
23	K24	259	218	67081	47524	56462
24	K26	266	243	70756	59049	64638

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
25	K27	269	365	72361	133225	98185
26	K28	224	240	50176	57600	53760
27	K29	220	164	48400	26896	36080
28	K30	259	377	67081	142129	97643
29	K31	234	347	54756	120409	81198
30	K32	263	282	69169	79524	74166
31	K33	218	166	47524	27556	36188
32	K34	217	348	47089	121104	75516
33	K35	261	333	68121	110889	86913
34	K36	271	321	73441	103041	86991
35	K37	271	423	73441	178929	114633
36	K38	228	364	51984	132496	82992
37	K39	242	257	58564	66049	62194
38	K40	262	212	68644	44944	55544
39	K41	266	286	70756	81796	76076
40	K42	268	309	71824	95481	82812
41	K43	263	334	69169	111556	87842
42	K44	260	342	67600	116964	88920
43	K45	267	359	71289	128881	95853
44	K46	241	272	58081	73984	65552
45	K47	266	303	70756	91809	80598
46	K48	261	388	68121	150544	101268
47	K49	237	227	56169	51529	53799
48	K50	213	197	45369	38809	41961
49	K52	226	276	51076	76176	62376
50	K53	235	383	55225	146689	90005
51	K54	232	306	53824	93636	70992
52	K55	258	359	66564	128881	92622

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
53	K56	255	240	65025	57600	61200
54	K58	248	165	61504	27225	40920
55	K59	244	311	59536	96721	75884
56	K60	210	176	44100	30976	36960
57	K62	258	213	66564	45369	54954
58	K63	240	385	57600	148225	92400
59	K64	269	292	72361	85264	78548
60	K65	254	220	64516	48400	55880
61	K66	224	260	50176	67600	58240
62	K68	254	297	64516	88209	75438
63	K69	259	264	67081	69696	68376
64	K70	251	229	63001	52441	57479
65	K71	261	263	68121	69169	68643
66	K72	197	176	38809	30976	34672
67	K73	244	153	59536	23409	37332
68	K74	220	189	48400	35721	41580
69	K77	230	269	52900	72361	61870
70	K78	251	219	63001	47961	54969
71	K79	200	261	40000	68121	52200
72	K80	229	257	52441	66049	58853
73	R1	201	232	40401	53824	46632
74	R2	239	317	57121	100489	75763
75	R3	225	185	50625	34225	41625
76	R4	250	167	62500	27889	41750
77	R5	209	348	43681	121104	72732
78	R6	261	250	68121	62500	65250
79	R7	227	308	51529	94864	69916
80	R8	262	225	68644	50625	58950

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
81	R9	246	108	60516	11664	26568
82	R10	223	242	49729	58564	53966
83	R11	243	237	59049	56169	57591
84	R12	222	252	49284	63504	55944
85	R13	220	282	48400	79524	62040
86	R14	183	104	33489	10816	19032
87	R15	253	352	64009	123904	89056
88	R16	239	300	57121	90000	71700
89	R17	246	102	60516	10404	25092
90	R18	222	335	49284	112225	74370
91	R19	242	327	58564	106929	79134
92	R20	227	267	51529	71289	60609
93	R21	207	342	42849	116964	70794
94	R22	256	357	65536	127449	91392
95	R24	219	220	47961	48400	48180
96	R25	232	367	53824	134689	85144
97	R26	229	257	52441	66049	58853
98	R27	256	362	65536	131044	92672
99	R28	217	310	47089	96100	67270
100	R29	196	137	38416	18769	26852
101	R30	214	325	45796	105625	69550
102	R31	248	373	61504	139129	92504
103	R32	192	188	36864	35344	36096
104	R33	242	310	58564	96100	75020
105	R34	255	248	65025	61504	63240
106	R35	235	310	55225	96100	72850
107	R36	227	228	51529	51984	51756
108	R38	206	230	42436	52900	47380
109	R39	219	335	47961	112225	73365
110	R40	216	313	46656	97969	67608

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
111	R41	255	350	65025	122500	89250
112	R42	244	145	59536	21025	35380
113	R43	236	303	55696	91809	71508
114	R44	219	82	47961	6724	17958
115	R45	261	240	68121	57600	62640
116	R46	257	208	66049	43264	53456
117	R47	262	187	68644	34969	48994
118	R48	228	392	51984	153664	89376
119	R49	208	238	43264	56644	49504
120	R50	202	345	40804	119025	69690
121	R51	257	262	66049	68644	67334
122	R52	227	370	51529	136900	83990
123	R53	194	218	37636	47524	42292
124	R54	253	317	64009	100489	80201
125	R55	257	335	66049	112225	86095
126	R56	237	278	56169	77284	65886
127	R57	231	323	53361	104329	74613
128	R58	234	308	54756	94864	72072
129	R59	241	187	58081	34969	45067
130	R60	176	148	30976	21904	26048
131	R61	206	150	42436	22500	30900
132	R62	213	212	45369	44944	45156
133	R63	257	283	66049	80089	72731
134	R64	212	253	44944	64009	53636
135	R65	250	293	62500	85849	73250
136	R66	263	223	69169	49729	58649
137	R67	221	182	48841	33124	40222
138	R68	216	282	46656	79524	60912
139	R69	261	307	68121	94249	80127
140	R70	226	190	51076	36100	42940
141	R71	206	260	42436	67600	53560

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
142	R72	265	233	70225	54289	61745
143	R73	255	267	65025	71289	68085
144	R74	225	277	50625	76729	62325
145	R75	212	267	44944	71289	56604
146	R76	216	267	46656	71289	57672
147	R77	237	310	56169	96100	73470
148	R78	225	292	50625	85264	65700
149	R79	238	255	56644	65025	60690
150	R80	263	172	69169	29584	45236
151	I1	215	206	46225	42436	44290
152	I2	243	223	59049	49729	54189
153	I3	210	268	44100	71824	56280
154	I4	235	236	55225	55696	55460
155	I5	216	285	46656	81225	61560
156	I6	257	195	66049	38025	50115
157	I8	231	281	53361	78961	64911
158	I9	274	304	75076	92416	83296
159	I10	222	207	49284	42849	45954
160	I11	255	310	65025	96100	79050
161	I12	210	258	44100	66564	54180
162	I13	208	293	43264	85849	60944
163	I14	216	126	46656	15876	27216
164	I15	209	269	43681	72361	56221
165	I16	243	307	59049	94249	74601
166	I17	238	221	56644	48841	52598
167	I18	261	248	68121	61504	64728
168	I19	248	270	61504	72900	66960
169	I20	230	237	52900	56169	54510
170	I21	204	317	41616	100489	64668
171	I23	218	224	47524	50176	48832

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
172	I24	250	245	62500	60025	61250
173	I25	257	296	66049	87616	76072
174	I26	227	202	51529	40804	45854
175	I27	197	149	38809	22201	29353
176	I28	237	329	56169	108241	77973
177	I29	217	120	47089	14400	26040
178	I30	251	321	63001	103041	80571
179	I31	247	261	61009	68121	64467
180	I32	245	302	60025	91204	73990
181	I33	228	295	51984	87025	67260
182	I34	254	342	64516	116964	86868
183	I36	260	221	67600	48841	57460
184	I37	230	283	52900	80089	65090
185	I38	223	221	49729	48841	49283
186	I39	247	238	61009	56644	58786
187	I40	218	345	47524	119025	75210
188	I42	209	337	43681	113569	70433
189	I43	241	298	58081	88804	71818
190	I44	250	272	62500	73984	68000
191	I45	261	131	68121	17161	34191
192	I48	167	248	27889	61504	41416
193	I49	264	220	69696	48400	58080
194	I50	266	266	70756	70756	70756
195	I51	246	231	60516	53361	56826
196	I52	220	229	48400	52441	50380
197	I53	232	276	53824	76176	64032
198	I54	231	239	53361	57121	55209
199	I55	207	208	42849	43264	43056
200	I57	243	328	59049	107584	79704

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
201	I59	260	340	67600	115600	88400
202	I60	242	303	58564	91809	73326
203	I61	229	187	52441	34969	42823
204	I62	240	178	57600	31684	42720
205	I63	212	285	44944	81225	60420
206	I64	223	316	49729	99856	70468
207	I65	266	200	70756	40000	53200
208	I66	215	231	46225	53361	49665
209	I67	246	278	60516	77284	68388
210	I68	237	292	56169	85264	69204
211	I69	242	335	58564	112225	81070
212	I70	272	326	73984	106276	88672
213	I71	196	165	38416	27225	32340
214	I72	185	226	34225	51076	41810
215	I73	248	180	61504	32400	44640
216	I74	249	321	62001	103041	79929
217	I75	252	175	63504	30625	44100
218	I76	227	300	51529	90000	68100
219	I77	248	330	61504	108900	81840
220	I78	203	217	41209	47089	44051
221	I79	255	299	65025	89401	76245
222	I80	215	264	46225	69696	56760
223	G1	246	321	60516	103041	78966
224	G2	266	380	70756	144400	101080
225	G3	247	356	61009	126736	87932
226	G4	218	351	47524	123201	76518
227	G5	220	386	48400	148996	84920
228	G6	251	404	63001	163216	101404
229	G7	232	316	53824	99856	73312

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
230	G8	231	313	53361	97969	72303
231	G9	223	373	49729	139129	83179
232	G10	242	391	58564	152881	94622
233	G11	177	323	31329	104329	57171
234	G12	234	343	54756	117649	80262
235	G13	220	345	48400	119025	75900
236	G14	224	308	50176	94864	68992
237	G15	228	349	51984	121801	79572
238	G16	234	372	54756	138384	87048
239	G17	241	351	58081	123201	84591
240	G18	202	293	40804	85849	59186
241	G19	237	268	56169	71824	63516
242	G20	219	351	47961	123201	76869
243	G21	272	289	73984	83521	78608
244	G22	261	332	68121	110224	86652
245	G23	261	347	68121	120409	90567
246	G24	220	370	48400	136900	81400
247	G25	253	332	64009	110224	83996
248	G26	229	332	52441	110224	76028
249	G27	250	364	62500	132496	91000
250	G28	274	285	75076	81225	78090
251	G29	259	305	67081	93025	78995
252	G30	249	345	62001	119025	85905
253	G31	232	379	53824	143641	87928
254	G32	219	214	47961	45796	46866
255	G33	242	285	58564	81225	68970
256	G34	215	327	46225	106929	70305
257	G35	257	359	66049	128881	92263
258	G36	250	266	62500	70756	66500

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
259	G37	224	301	50176	90601	67424
260	G38	209	342	43681	116964	71478
261	G39	263	323	69169	104329	84949
262	G40	226	379	51076	143641	85654
263	G41	221	324	48841	104976	71604
264	G42	233	298	54289	88804	69434
265	G43	228	244	51984	59536	55632
266	G44	251	264	63001	69696	66264
267	G45	250	353	62500	124609	88250
268	G46	261	377	68121	142129	98397
269	G47	250	313	62500	97969	78250
270	G48	233	318	54289	101124	74094
271	G49	239	374	57121	139876	89386
272	G50	205	376	42025	141376	77080
273	G51	235	353	55225	124609	82955
274	G52	214	364	45796	132496	77896
275	G53	252	394	63504	155236	99288
276	G54	265	361	70225	130321	95665
277	G55	251	340	63001	115600	85340
278	G56	242	351	58564	123201	84942
279	G57	245	320	60025	102400	78400
280	G58	242	317	58564	100489	76714
281	G59	214	357	45796	127449	76398
282	G60	180	374	32400	139876	67320
283	G61	256	386	65536	148996	98816
284	G62	248	290	61504	84100	71920
285	G63	237	380	56169	144400	90060
286	G64	233	324	54289	104976	75492
287	G65	239	344	57121	118336	82216

Sr.No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
288	G66	240	375	57600	140625	90000
289	G67	245	394	60025	155236	96530
290	G68	227	363	51529	131769	82401
291	G69	236	338	55696	114244	79768
292	G70	241	362	58081	131044	87242
293	G71	212	266	44944	70756	56392
294	G72	189	234	35721	54756	44226
295	G73	170	410	28900	168100	69700
296	G74	242	392	58564	153664	94864
297	G75	245	386	60025	148996	94570
298	G76	247	320	61009	102400	79040
299	G77	254	334	64516	111556	84836
300	G78	239	365	57121	133225	87235
301	G79	200	311	40000	96721	62200
302	G80	255	287	65025	82369	73185
Total		71281	85295	16965507	25576261	20212789

$$N = 302, \quad M_X = 236.03, \quad M_Y = 282.43$$

$$\begin{aligned}
 1] \quad r &= \frac{\sum xy - NM_X M_Y}{\sqrt{\left[\sum x^2 - NM_X^2\right] \left[\sum y^2 - NM_Y^2\right]}} \\
 &= \frac{20212789 - (302 \times 236.03 \times 282.43)}{\sqrt{\left[16965507 - 302 \times (236.03)^2\right] \left[25576261 - 302 \times (282.43)^2\right]}} \\
 &= \frac{20212789 - 20131910}{\sqrt{141038.41} \times \sqrt{1486716.1}} \\
 &= \frac{80879.225}{457912.74}
 \end{aligned}$$

$$r = 0.18$$

$$2] \quad S_E$$

$$\begin{aligned}
 \sigma &= \frac{1-r^2}{\sqrt{N}} \\
 &= \frac{1-(0.18)^2}{\sqrt{302}}
 \end{aligned}$$

$$\sigma = 0.056$$

2. Correlation between E.I.Score (E.Q.) and Academic achievement score of Male student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K2	249	233	62001	54289	58017
2	K3	268	142	71824	20164	38056
3	K4	256	311	65536	96721	79616
4	K7	214	391	45796	152881	83674
5	K12	252	222	63504	49284	55944
6	K13	227	110	51529	12100	24970
7	K16	269	305	72361	93025	82045
8	K17	259	266	67081	70756	68894
9	K19	231	209	53361	43681	48279
10	K21	246	125	60516	15625	30750
11	K23	259	218	67081	47524	56462
12	K24	266	243	70756	59049	64638
13	K26	224	240	50176	57600	53760
14	K27	220	164	48400	26896	36080
15	K28	259	377	67081	142129	97643
16	K29	234	347	54756	120409	81198
17	K34	271	321	73441	103041	86991
18	K37	242	257	58564	66049	62194
19	K40	268	309	71824	95481	82812
20	K44	241	272	58081	73984	65552
21	K48	213	197	45369	38809	41961
22	K49	226	276	51076	76176	62376
23	K52	258	359	66564	128881	92622
24	K54	248	165	61504	27225	40920
25	K55	244	311	59536	96721	75884
26	K58	258	213	66564	45369	54954

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
27	K61	254	220	64516	48400	55880
28	K64	259	264	67081	69696	68376
29	K65	251	229	63001	52441	57479
30	K66	261	263	68121	69169	68643
31	K67	197	176	38809	30976	34672
32	K68	244	153	59536	23409	37332
33	K69	220	189	48400	35721	41580
34	K70	230	269	52900	72361	61870
35	K71	251	219	63001	47961	54969
36	K72	200	261	40000	68121	52200
37	K73	229	257	52441	66049	58853
38	R1	201	232	40401	53824	46632
39	R3	225	185	50625	34225	41625
40	R4	250	167	62500	27889	41750
41	R7	227	308	51529	94864	69916
42	R9	246	108	60516	11664	26568
43	R10	223	242	49729	58564	53966
44	R11	243	237	59049	56169	57591
45	R12	222	252	49284	63504	55944
46	R13	220	282	48400	79524	62040
47	R14	183	104	33489	10816	19032
48	R17	246	102	60516	10404	25092
49	R19	242	327	58564	106929	79134
50	R22	256	357	65536	127449	91392
51	R26	229	257	52441	66049	58853
52	R27	256	362	65536	131044	92672
53	R29	196	137	38416	18769	26852
54	R30	214	325	45796	105625	69550
55	R34	255	248	65025	61504	63240
56	R38	206	230	42436	52900	47380

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
57	R40	216	313	46656	97969	67608
58	R42	244	145	59536	21025	35380
59	R44	219	82	47961	6724	17958
60	R45	261	240	68121	57600	62640
61	R46	257	208	66049	43264	53456
62	R47	262	187	68644	34969	48994
63	R48	228	392	51984	153664	89376
64	R50	202	345	40804	119025	69690
65	R51	257	262	66049	68644	67334
66	R53	194	218	37636	47524	42292
67	R54	253	317	64009	100489	80201
68	R55	257	335	66049	112225	86095
69	R59	241	187	58081	34969	45067
70	R60	176	148	30976	21904	26048
71	R61	206	150	42436	22500	30900
72	R62	213	212	45369	44944	45156
73	R63	257	283	66049	80089	72731
74	R64	212	253	44944	64009	53636
75	R65	250	293	62500	85849	73250
76	R66	263	223	69169	49729	58649
77	R67	221	182	48841	33124	40222
78	R68	216	282	46656	79524	60912
79	R69	261	307	68121	94249	80127
80	R70	226	190	51076	36100	42940
81	R72	265	233	70225	54289	61745
82	R74	225	277	50625	76729	62325
83	R76	216	267	46656	71289	57672
84	R77	237	310	56169	96100	73470

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
85	R78	225	292	50625	85264	65700
86	R80	263	172	69169	29584	45236
87	I4	235	236	55225	55696	55460
88	I5	216	285	46656	81225	61560
89	I6	257	195	66049	38025	50115
90	I8	231	281	53361	78961	64911
91	I9	274	304	75076	92416	83296
92	I10	222	207	49284	42849	45954
93	I11	255	310	65025	96100	79050
94	I12	210	258	44100	66564	54180
95	I14	216	126	46656	15876	27216
96	I16	243	307	59049	94249	74601
97	I18	261	248	68121	61504	64728
98	I20	230	237	52900	56169	54510
99	I23	218	224	47524	50176	48832
100	I27	197	149	38809	22201	29353
101	I28	237	329	56169	108241	77973
102	I29	217	120	47089	14400	26040
103	I30	251	321	63001	103041	80571
104	I31	247	261	61009	68121	64467
105	I32	245	302	60025	91204	73990
106	I34	254	342	64516	116964	86868
107	I40	218	345	47524	119025	75210
108	I43	241	298	58081	88804	71818
109	I48	167	248	27889	61504	41416
110	I49	264	220	69696	48400	58080
111	I51	246	231	60516	53361	56826
112	I53	232	276	53824	76176	64032
113	I54	231	239	53361	57121	55209

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
114	I55	207	208	42849	43264	43056
115	I57	243	328	59049	107584	79704
116	I62	240	178	57600	31684	42720
117	I63	212	285	44944	81225	60420
118	I64	223	316	49729	99856	70468
119	I65	266	200	70756	40000	53200
120	I66	215	231	46225	53361	49665
121	I67	246	278	60516	77284	68388
122	I69	242	335	58564	112225	81070
123	I71	196	165	38416	27225	32340
124	I76	227	300	51529	90000	68100
125	I79	255	299	65025	89401	76245
126	G2	266	380	70756	144400	101080
127	G4	218	351	47524	123201	76518
128	G5	220	386	48400	148996	84920
129	G6	251	404	63001	163216	101404
130	G8	231	313	53361	97969	72303
131	G11	177	323	31329	104329	57171
132	G13	220	345	48400	119025	75900
133	G14	224	308	50176	94864	68992
134	G16	234	372	54756	138384	87048
135	G17	241	351	58081	123201	84591
136	G18	202	293	40804	85849	59186
137	G19	237	268	56169	71824	63516
138	G20	219	351	47961	123201	76869
139	G21	272	289	73984	83521	78608
140	G25	253	332	64009	110224	83996
141	G27	250	364	62500	132496	91000
142	G28	274	285	75076	81225	78090

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
143	G31	232	379	53824	143641	87928
144	G32	219	214	47961	45796	46866
145	G34	215	327	46225	106929	70305
146	G35	257	359	66049	128881	92263
147	G36	250	266	62500	70756	66500
148	G37	224	301	50176	90601	67424
149	G38	209	342	43681	116964	71478
150	G39	263	323	69169	104329	84949
151	G40	226	379	51076	143641	85654
152	G42	233	298	54289	88804	69434
153	G43	228	244	51984	59536	55632
154	G44	251	264	63001	69696	66264
155	G45	250	353	62500	124609	88250
156	G48	233	318	54289	101124	74094
157	G52	214	364	45796	132496	77896
158	G53	252	394	63504	155236	99288
159	G54	265	361	70225	130321	95665
160	G55	251	340	63001	115600	85340
161	G60	180	374	32400	139876	67320
162	G61	256	386	65536	148996	98816
163	G67	245	394	60025	155236	96530
164	G68	227	363	51529	131769	82401
165	G69	236	338	55696	114244	79768
166	G70	241	362	58081	131044	87242
167	G71	212	266	44944	70756	56392
168	G72	189	234	35721	54756	44226
169	G73	170	410	28900	168100	69700
170	G76	247	320	61009	102400	79040
171	G77	254	334	64516	111556	84836
172	G78	239	365	57121	133225	87235
173	G80	255	287	65025	82369	73185
Total		40660	46846	9644838	13623950	11048940

$$N=173, M_x=235.03, M_y=270.79$$

$$\begin{aligned}
 1) \quad r &= \frac{\sum xy - NM_x M_y}{\sqrt{\left[\sum x^2 - NM_x^2\right] \left[\sum y^2 - NM_y^2\right]}} \\
 &= \frac{11048940 - (173 \times 235.03 \times 270.79)}{\sqrt{\left[9644838 - 173 \times (235.03)^2\right] \left[13623950 - 173 \times (270.79)^2\right]}} \\
 &= \frac{38567.15}{\sqrt{88437.544 \times 938340.23}} \\
 &= \frac{38567.15}{288128.94}
 \end{aligned}$$

$$r = 0.1339$$

$$2) \quad S_E$$

$$\sigma = \frac{1-r^2}{\sqrt{N}}$$

$$= \frac{0.9831}{\sqrt{173}}$$

$$\sigma = 0.075$$

3. Correlation between E.I.Score (E.Q.) and Academic achievement score of Female student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K1	219	341	47961	116281	74679
2	K5	255	302	65025	91204	77010
3	K6	259	269	67081	72361	69671
4	K8	198	169	39204	28561	33462
5	K9	197	121	38809	14641	23837
6	K10	268	327	71824	106929	87636
7	K11	245	334	60025	111556	81830
8	K14	225	187	50625	34969	42075
9	K15	220	305	48400	93025	67100
10	K18	261	374	68121	139876	97614
11	K20	278	286	77284	81796	79508
12	K22	225	274	50625	75076	61650
13	K25	269	365	72361	133225	98185
14	K30	263	282	69169	79524	74166
15	K31	218	166	47524	27556	36188
16	K32	217	348	47089	121104	75516
17	K33	261	333	68121	110889	86913
18	K35	271	423	73441	178929	114633
19	K36	228	364	51984	132496	82992
20	K38	262	212	68644	44944	55544
21	K39	266	286	70756	81796	76076
22	K41	263	334	69169	111556	87842
23	K42	260	342	67600	116964	88920
24	K43	267	359	71289	128881	95853
25	K45	266	303	70756	91809	80598
26	K46	261	388	68121	150544	101268
27	K47	237	227	56169	51529	53799
28	K50	235	383	55225	146689	90005

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
29	K51	232	306	53824	93636	70992
30	K53	255	240	65025	57600	61200
31	K56	210	176	44100	30976	36960
32	K59	240	385	57600	148225	92400
33	K60	269	292	72361	85264	78548
34	K62	224	260	50176	67600	58240
35	K63	254	297	64516	88209	75438
36	R2	239	317	57121	100489	75763
37	R5	209	348	43681	121104	72732
38	R6	261	250	68121	62500	65250
39	R8	262	225	68644	50625	58950
40	R15	253	352	64009	123904	89056
41	R16	239	300	57121	90000	71700
42	R18	222	335	49284	112225	74370
43	R20	227	267	51529	71289	60609
44	R21	207	342	42849	116964	70794
45	R24	219	220	47961	48400	48180
46	R25	232	367	53824	134689	85144
47	R28	217	310	47089	96100	67270
48	R31	248	373	61504	139129	92504
49	R32	192	188	36864	35344	36096
50	R33	242	310	58564	96100	75020
51	R35	235	310	55225	96100	72850
52	R36	227	228	51529	51984	51756
53	R39	219	335	47961	112225	73365
54	R41	255	350	65025	122500	89250
55	R43	236	303	55696	91809	71508
56	R49	208	238	43264	56644	49504

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
57	R52	227	370	51529	136900	83990
58	R56	237	278	56169	77284	65886
59	R57	231	323	53361	104329	74613
60	R58	234	308	54756	94864	72072
61	R71	206	260	42436	67600	53560
62	R73	255	267	65025	71289	68085
63	R75	212	267	44944	71289	56604
64	R79	238	255	56644	65025	60690
65	I1	215	206	46225	42436	44290
66	I2	243	223	59049	49729	54189
67	I3	210	268	44100	71824	56280
68	I13	208	293	43264	85849	60944
69	I15	209	269	43681	72361	56221
70	I17	238	221	56644	48841	52598
71	I19	248	270	61504	72900	66960
72	I21	204	317	41616	100489	64668
73	I24	250	245	62500	60025	61250
74	I25	257	296	66049	87616	76072
75	I26	227	202	51529	40804	45854
76	I33	228	295	51984	87025	67260
77	I36	260	221	67600	48841	57460
78	I37	230	283	52900	80089	65090
79	I38	223	221	49729	48841	49283
80	I39	247	238	61009	56644	58786
81	I42	209	337	43681	113569	70433
82	I44	250	272	62500	73984	68000
83	I45	261	131	68121	17161	34191
84	I50	266	266	70756	70756	70756
85	I52	220	229	48400	52441	50380

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
86	I59	260	340	67600	115600	88400
87	I60	242	303	58564	91809	73326
88	I61	229	187	52441	34969	42823
89	I68	237	292	56169	85264	69204
90	I70	272	326	73984	106276	88672
91	I72	185	226	34225	51076	41810
92	I73	248	180	61504	32400	44640
93	I74	249	321	62001	103041	79929
94	I75	252	175	63504	30625	44100
95	I77	248	330	61504	108900	81840
96	I78	203	217	41209	47089	44051
97	I80	215	264	46225	69696	56760
98	G1	246	321	60516	103041	78966
99	G3	247	356	61009	126736	87932
100	G7	232	316	53824	99856	73312
101	G9	223	373	49729	139129	83179
102	G10	242	391	58564	152881	94622
103	G12	234	343	54756	117649	80262
104	G15	228	349	51984	121801	79572
105	G22	261	332	68121	110224	86652
106	G23	261	347	68121	120409	90567
107	G24	220	370	48400	136900	81400
108	G26	229	332	52441	110224	76028
109	G29	259	305	67081	93025	78995
110	G30	249	345	62001	119025	85905
111	G33	242	285	58564	81225	68970
112	G41	221	324	48841	104976	71604
113	G46	261	377	68121	142129	98397

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
114	G47	250	313	62500	97969	78250
115	G48	239	374	57121	139876	89386
116	G49	205	376	42025	141376	77080
117	G50	235	353	55225	124609	82955
118	G51	242	351	58564	123201	84942
119	G52	245	320	60025	102400	78400
120	G53	242	317	58564	100489	76714
121	G54	214	357	45796	127449	76398
122	G55	248	290	61504	84100	71920
123	G56	237	380	56169	144400	90060
124	G57	233	324	54289	104976	75492
125	G58	239	344	57121	118336	82216
126	G59	240	375	57600	140625	90000
127	G60	242	392	58564	153664	94864
128	G61	245	386	60025	148996	94570
129	G62	200	311	40000	96721	62200
Total		30621	38449	7320669	11952311	9163849

$$N=129, \quad M_x=237.73, \quad M_y=298.05$$

$$\begin{aligned}
 1) \quad r &= \frac{\sum xy - NM_x M_y}{\sqrt{\left[\sum x^2 - NM_x^2\right] \left[\sum y^2 - NM_y^2\right]}} \\
 &= \frac{9163849 - (129 \times 237.37 \times 298.05)}{\sqrt{\left[7320669 - 129 \times (237.37)^2\right] \left[11952311 - 129 \times (298.05)^2\right]}} \\
 &= \frac{9163849 - 91265086}{\sqrt{52226.32 \times 492750.48}} \\
 &= \frac{37340.424}{160419.9}
 \end{aligned}$$

$$r = 0.2327$$

$$2) \quad S_E$$

$$\begin{aligned}
 \sigma &= \frac{1-r^2}{\sqrt{N}} \\
 &= \frac{1-(0.23)^2}{\sqrt{129}} \\
 \sigma &= 0.083
 \end{aligned}$$

4. Correlation between E.I.Score (E.Q.) and Academic achievement score of Arts student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K1	219	341	47961	116281	74679
2	K2	249	233	62001	54289	58017
3	K4	256	311	65536	96721	79616
4	K6	259	269	67081	72361	69671
5	K7	214	391	45796	152881	83674
6	K9	197	121	38809	14641	23837
7	K10	268	327	71824	106929	87636
8	K12	252	222	63504	49284	55944
9	K14	225	187	50625	34969	42075
10	K15	220	305	48400	93025	67100
11	K17	259	266	67081	70756	68894
12	K18	261	374	68121	139876	97614
13	K22	225	274	50625	75076	61650
14	K23	259	218	67081	47524	56462
15	K25	269	365	72361	133225	98185
16	K28	259	377	67081	142129	97643
17	K30	263	282	69169	79524	74166
18	K31	218	166	47524	27556	36188
19	K32	217	348	47089	121104	75516
20	K34	271	321	73441	103041	86991
21	K35	271	423	73441	178929	11463
22	K36	228	364	51984	132496	82992
23	K37	242	257	58564	66049	62194
24	K40	268	309	71824	95481	82812
25	K41	263	334	69169	111556	87842
26	K43	267	359	71289	128881	95853
27	K44	241	272	58081	73984	65552

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
28	K45	266	303	70756	91809	80598
29	K48	213	197	45369	38809	41961
30	K50	235	383	55225	146689	90005
31	K51	232	306	53824	93636	70992
32	K53	255	240	65025	57600	61200
33	K55	244	311	59536	96721	75884
34	K56	210	176	44100	30976	36960
35	K58	258	213	66564	45369	54954
36	K59	240	385	57600	148225	92400
37	K60	269	292	72361	85264	78548
38	K64	259	264	67081	69696	68376
39	K66	261	263	68121	69169	68643
40	K70	230	269	52900	72361	61870
41	K73	229	257	52441	66049	58853
42	R1	201	232	40401	53824	46632
43	R7	227	308	51529	94864	69916
44	R12	222	252	49284	63504	55944
45	R13	220	282	48400	79524	62040
46	R14	183	104	33489	10816	19032
47	R15	253	352	64009	123904	89056
48	R16	239	300	57121	90000	71700
49	R18	222	335	49284	112225	74370
50	R20	227	267	51529	71289	60609
51	R22	256	357	65536	127449	91392
52	R24	219	220	47961	48400	48180
53	R25	232	367	53824	134689	85144
54	R26	229	257	52441	66049	58853
55	R27	256	362	65536	131044	92672
56	R29	196	137	38416	18769	26852

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
57	R30	214	325	45796	105625	69550
58	R31	248	373	61504	139129	92504
59	R33	242	310	58564	96100	75020
60	R34	255	248	65025	61504	63240
61	R36	227	228	51529	51984	51756
62	R38	206	230	42436	52900	47380
63	R39	219	335	47961	112225	73365
64	R40	216	313	46656	97969	67608
65	R41	255	350	65025	122500	89250
66	R42	244	145	59536	21025	35380
67	R43	236	303	55696	91809	71508
68	R45	261	240	68121	57600	62640
69	R47	262	187	68644	34969	48994
70	R48	228	392	51984	153664	89376
71	R50	202	345	40804	119025	69690
72	R51	257	262	66049	68644	67334
73	R54	253	317	64009	100489	80201
74	R55	257	335	66049	112225	86095
75	R57	231	323	53361	104329	74613
76	R58	234	308	54756	94864	72072
77	R59	241	187	58081	34969	45067
78	R62	213	212	45369	44944	45156
79	R64	212	253	44944	64009	53636
80	R68	216	282	46656	79524	60912
81	R70	226	190	51076	36100	42940
82	R73	255	267	65025	71289	68085
83	R74	225	277	50625	76729	62325
84	R75	212	267	44944	71289	56604

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
85	R76	216	267	46656	71289	57672
86	R77	237	310	56169	96100	73470
87	I1	215	206	46225	42436	44290
88	I2	243	223	59049	49729	54189
89	I3	210	268	44100	71824	56280
90	I4	235	236	55225	55696	55460
91	I5	216	285	46656	81225	61560
92	I6	257	195	66049	38025	50115
93	I8	231	281	53361	78961	64911
94	I9	274	304	75076	92416	83296
95	I10	222	207	49284	42849	45954
96	I11	255	310	65025	96100	79050
97	I12	210	258	44100	66564	54180
98	I13	208	293	43264	85849	60944
99	I14	216	126	46656	15876	27216
100	I15	209	269	43681	72361	56221
101	I16	243	307	59049	94249	74601
102	I17	238	221	56644	48841	52598
103	I18	261	248	68121	61504	64728
104	I19	248	270	61504	72900	66960
105	I20	230	237	52900	56169	54510
106	I21	204	317	41616	100489	64668
107	I23	218	224	47524	50176	48832
108	I24	250	245	62500	60025	61250
109	I25	257	296	66049	87616	76072
110	I26	227	202	51529	40804	45854
111	I27	197	149	38809	22201	29353
112	I28	237	329	56169	108241	77973
113	I29	217	120	47089	14400	26040

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
114	I30	251	321	63001	103041	80571
115	I31	247	261	61009	68121	64467
116	I32	245	302	60025	91204	73990
117	I33	228	295	51984	87025	67260
118	I34	254	342	64516	116964	86868
119	I36	260	221	67600	48841	57460
120	I37	230	283	52900	80089	65090
121	I38	223	221	49729	48841	49283
122	I39	247	238	61009	56644	58786
123	I40	218	345	47524	119025	75210
124	G2	266	380	70756	144400	101080
125	G3	247	356	61009	126736	87932
126	G4	218	351	47524	123201	76518
127	G5	220	386	48400	148996	84920
128	G7	232	316	53824	99856	73312
129	G8	231	313	53361	97969	72303
130	G9	223	373	49729	139129	83179
131	G10	242	391	58564	152881	94622
132	G12	234	343	54756	117649	80262
133	G15	228	349	51984	121801	79572
134	G16	234	372	54756	138384	87048
135	G19	237	268	56169	71824	63516
136	G23	261	347	68121	120409	90567
137	G24	220	370	48400	136900	81400
138	G30	249	345	62001	119025	85905
139	G31	232	379	53824	143641	87928
140	G33	242	285	58564	81225	68970
141	G34	215	327	46225	106929	70305
142	G38	209	342	43681	116964	71478
143	G39	263	323	69169	104329	84949

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
144	G41	221	324	48841	104976	71604
145	G43	228	244	51984	59536	55632
146	G49	239	374	57121	139876	89386
147	G52	214	364	45796	132496	77896
148	G53	252	394	63504	155236	99288
149	G54	265	361	70225	130321	95665
150	G55	251	340	63001	115600	85340
151	G56	242	351	58564	123201	84942
152	G59	214	357	45796	127449	76398
153	G60	180	374	32400	139876	67320
154	G61	256	386	65536	148996	98816
155	G62	248	290	61504	84100	71920
156	G63	237	380	56169	144400	90060
157	G64	233	324	54289	104976	75492
158	G65	239	344	57121	118336	82216
159	G66	240	375	57600	140625	90000
160	G67	245	394	60025	155236	96530
161	G68	227	363	51529	131769	82401
162	G69	236	338	55696	114244	79768
163	G70	241	362	58081	131044	87242
164	G72	189	234	35721	54756	44226
165	G74	242	392	58564	153664	94864
166	G77	254	334	64516	111556	84836
167	G78	239	365	57121	133225	87235
168	G79	200	311	40000	96721	62200
169	G80	255	287	65025	82369	73185
Total		39844	49721	9461272	15376265	11780833

$$M_x=235.76 \quad , \quad M_y=294.21, N=169$$

$$\begin{aligned}
 1) \quad r &= \frac{\sum xy - NM_x M_y}{\sqrt{\left[\sum x^2 - NM_x^2 \right] \left[\sum y^2 - NM_y^2 \right]}} \\
 &= \frac{11780833 - (169 \times 235.76 \times 294.21)}{\sqrt{\left[9461272 - 169 \times (235.76)^2 \right] \left[15376265 - 169 \times (294.21)^2 \right]}} \\
 &= \frac{11780833 - 11722338}{\sqrt{67782.586} \times \sqrt{747705.43}} \\
 &= \frac{58494.518}{225125.32}
 \end{aligned}$$

$$r = 0.2598 = 0.26$$

$$2) \quad S_E$$

$$\sigma = \frac{1-r^2}{\sqrt{N}}$$

$$= \frac{1-0.0676}{\sqrt{169}}$$

$$\sigma = 0.072$$

5. Correlation between E.I.Score (E.Q.) and Academic achievement score of Science Faculty's student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K3	268	142	71824	20164	38056
2	K5	255	302	65025	91204	77010
3	K11	245	334	60025	111556	81830
4	K13	227	110	51529	12100	24970
5	K16	269	305	72361	93025	82045
6	K19	231	209	53361	43681	48279
7	K20	278	286	77284	81796	79508
8	K21	246	125	60516	15625	30750
9	K24	266	243	70756	59049	64638
10	K26	224	240	50176	57600	53760
11	K29	234	347	54756	120409	81198
12	K33	261	333	68121	110889	86913
13	K38	262	212	68644	44944	55544
14	K39	266	286	70756	81796	76076
15	K42	260	342	67600	116964	88920
16	K46	261	388	68121	150544	101268
17	K47	237	227	56169	51529	53799
18	K49	226	276	51076	76176	62376
19	K52	258	359	66564	128881	92622
20	K54	248	165	61504	27225	40920
21	K61	254	220	64516	48400	55880
22	K62	224	260	50176	67600	58240
23	K63	254	297	64516	88209	75438
24	K65	251	229	63001	52441	57479
25	K67	197	176	38809	30976	34672
26	K68	244	153	59536	23409	37332

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
27	K69	220	189	48400	35721	41580
28	K71	251	219	63001	47961	54969
29	R2	239	317	57121	100489	75763
30	R3	225	185	50625	34225	41625
31	R4	250	167	62500	27889	41750
32	R5	209	348	43681	121104	72732
33	R6	261	250	68121	62500	65250
34	R8	262	225	68644	50625	58950
35	R9	246	108	60516	11664	26568
36	R10	223	242	49729	58564	53966
37	R11	243	237	59049	56169	57591
38	R17	246	102	60516	10404	25092
39	R19	242	327	58564	106929	79134
40	R21	207	342	42849	116964	70794
41	R28	217	310	47089	96100	67270
42	R32	192	188	36864	35344	36096
43	R35	235	310	55225	96100	72850
44	R44	219	82	47961	6724	17958
45	R46	257	208	66049	43264	53456
46	R49	208	238	43264	56644	49504
47	R52	227	370	51529	136900	83990
48	R53	194	218	37636	47524	42292
49	R56	237	278	56169	77284	65886
50	R60	176	148	30976	21904	26048
51	R61	206	150	42436	22500	30900
52	R63	257	283	66049	80089	72731
53	R65	250	293	62500	85849	73250
54	R66	263	223	69169	49729	58649
55	R67	221	182	48841	33124	40222

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
56	R69	261	307	68121	94249	80127
57	R71	206	260	42436	67600	53560
58	R72	265	233	70225	54289	61745
59	R78	225	292	50625	85264	65700
60	R79	238	255	56644	65025	60690
61	R80	263	172	69169	29584	45236
62	I42	209	337	43681	113569	70433
63	I43	241	298	58081	88804	71818
64	I44	250	272	62500	73984	68000
65	I45	261	131	68121	17161	34191
66	I49	264	220	69696	48400	58080
67	I50	266	266	70756	70756	70756
68	I51	246	231	60516	53361	56826
69	I52	220	229	48400	52441	50380
70	I53	232	276	53824	76176	64032
71	I54	231	239	53361	57121	55209
72	I55	207	208	42849	43264	43056
73	I57	243	328	59049	107584	79704
74	I59	260	340	67600	115600	88400
75	I60	242	303	58564	91809	73326
76	I61	229	187	52441	34969	42823
77	I62	240	178	57600	31684	42720
78	I63	212	285	44944	81225	60420
79	I64	223	316	49729	99856	70468
80	I65	266	200	70756	40000	53200
81	I66	215	231	46225	53361	49665
82	I67	246	278	60516	77284	68388
83	I69	242	335	58564	112225	81070
84	I70	272	326	73984	106276	88672

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
85	I71	196	165	38416	27225	32340
86	I72	185	226	34225	51076	41810
87	I74	249	321	62001	103041	79929
88	I75	252	175	63504	30625	44100
89	I76	227	300	51529	90000	68100
90	I77	248	330	61504	108900	81840
91	I78	203	217	41209	47089	44051
92	I79	255	299	65025	89401	76245
93	I80	215	264	46225	69696	56760
94	G1	246	321	60516	103041	78966
95	G6	251	404	63001	163216	101404
96	G11	177	323	31329	104329	57171
97	G13	220	345	48400	119025	75900
98	G14	224	308	50176	94864	68992
99	G17	241	351	58081	123201	84591
100	G18	202	293	40804	85849	59186
101	G20	219	351	47961	123201	76869
102	G21	272	289	73984	83521	78608
103	G25	253	332	64009	110224	83996
104	G27	250	364	62500	132496	91000
105	G29	259	305	67081	93025	78995
106	G32	219	214	47961	45796	46866
107	G35	257	359	66049	128881	92263
108	G36	250	266	62500	70756	66500
109	G37	224	301	50176	90601	67424
110	G40	226	379	51076	143641	85654
111	G42	233	298	54289	88804	69434

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
112	G44	251	264	63001	69696	66264
113	G45	250	353	62500	124609	88250
114	G46	261	377	68121	142129	98397
115	G47	250	313	62500	97969	78250
116	G48	233	318	54289	101124	74094
117	G50	205	376	42025	141376	77080
118	G51	235	353	55225	124609	82955
119	G57	245	320	60025	102400	78400
120	G71	212	266	44944	70756	56392
121	G73	170	410	28900	168100	69700
122	G75	245	386	60025	148996	94570
123	G76	247	320	61009	102400	79040
Total		29161	32994	6976867	9495088	7837470

$$N=123, \quad M_x=237.08, \quad M_y=268.24$$

$$\begin{aligned}
 1] \quad r &= \frac{\sum xy - NM_x M_y}{\sqrt{\left[\sum x^2 - NM_x^2\right] \left[\sum y^2 - NM_y^2\right]}} \\
 &= \frac{7837470 - (123 \times 237.08 \times 268.24)}{\sqrt{\left[6976867 - 123 \times (237.08)^2\right] \left[9495088 - 123 \times (268.24)^2\right]}} \\
 &= \frac{7837470 - 7822103.7}{\sqrt{63415.053} \times \sqrt{644906.2}} \\
 &= \frac{153663}{202229.47}
 \end{aligned}$$

$$r = 0.07598 = 0.076$$

$$2] \quad S_E$$

$$\sigma = \frac{1-r^2}{\sqrt{N}}$$

$$= \frac{0.9942}{\sqrt{123}}$$

$$\sigma = 0.09$$

6. Correlation between E.I.Score (E.Q.) and Academic achievement score of Commerce Faculty's student Teachers:

Sr. No.	Roll No.	E.I.Score (E.Q.) (x)	Academic achievement Score (y)	x^2	y^2	xy
1	K8	198	169	39204	28561	33462
2	K27	220	164	48400	26896	36080
3	K72	200	261	40000	68121	52200
4	I48	167	248	27889	61504	41416
5	I68	237	292	56169	85264	69204
6	I73	248	180	61504	32400	44640
7	G22	261	332	68121	110224	86652
8	G26	229	332	52441	110224	76028
9	G28	274	285	75076	81225	78090
10	G58	242	317	58564	100489	76714
Total		2276	2580	527368	704908	594486

$$N=10 \quad , \quad M_x=227.6 \quad , \quad M_y=258$$

$$\begin{aligned}
 1) \quad r &= \frac{\sum xy - NM_x M_y}{\sqrt{\left[\sum x^2 - NM_x^2 \right] \left[\sum y^2 - NM_y^2 \right]}} \\
 &= \frac{594486 - (10 \times 227.6 \times 258)}{\sqrt{\left[527368 - 10 \times (227.6)^2 \right] \left[704908 - 10 \times (258)^2 \right]}} \\
 &= \frac{594486 - 587208}{\sqrt{9350.4} \times \sqrt{39268}} \\
 &= \frac{7278}{19161.72}
 \end{aligned}$$

$$r = 0.3798 = 0.38$$

$$2) \quad s_E$$

$$\sigma = \frac{1-r^2}{\sqrt{N}}$$

$$= \frac{0.8556}{\sqrt{10}}$$

$$\sigma = 0.27$$