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YEAR 1981-82

CATEGORY 'A' 1 to 10 ACRS.

NO	x	x^d	x^2	y	y^d	y^2	xy
1	7	+ 0.17	0.07	9400	+ 2379.79	+ 5663400.4	+ 642.54
2	9	+ 2.27	5.15	16250	+ 9229.79	+ 85189023	+ 20951.62
3	7	+ 0.27	.07	9145	+ 2124.79	+ 4514732.5	+ 573.69
4	5	- 1.73	2.99	4050	- 2970.21	- 8822147.4	+ 5138.46
5	5	- 1.73	2.99	1275	- 5745.21	- 33007438	+ 9939.21
6	10	+ 3.27	10.69	3315	- 3705.21	- 1372858.1	- 12116.03
7	9	+ 2.27	5.15	4190	- 2830.21	- 8010088.6	- 6424.57
8	6	- 0.73	0.53	29740	+ 22719.79	+ 51618808	- 16585.44
9	8	+ 1.27	1.61	650	- 6370.21	- 40579575	- 8090.16
10	9	+ 2.27	5.15	16880	+ 9859.79	+ 97215459	+ 22381.72
11	8	+ 1.27	1.61	6050	- 970.21	- 941307.44	- 1232.16
12	5	- 1.73	2.99	2700	- 4320.21	- 18664214	+ 7473.96
13	5	- 1.73	2.99	24130	+ 17109.79	+ 29274408	- 29599.93
14	9	+ 2.27	5.15	1580	= 5440.21	- 29595885	- 12349.27
15	5	- 1.73	2.99	7000	- 20.21	- 408.44	+ 34.97
16	6	- 0.73	0.53	9765	+ 2744.79	+ 7533872.1	- 2003.69
17	7	- 4.73	22.37	3550	- 3470.21	- 12042357	+ 16414.09
18	10	+ 3.27	10.69	1945	- 5075.21	- 25757757	- 16595.93
19	10	+ 3.27	10.69	5325	- 1695.21	- 2873736.9	- 5543.33
20	7	+ 0.27	0.07	2235	- 4785.21	- 22898235	- 1292.00
21	5	- 1.73	2.99	2630	- 4390.21	- 19273944	+ 7595.06
22	8	+ 1.127	1.61	0450	- 6570.21	- 43167659	- 8344.16
23	9	+ 2.27	5.15	4222	- 2798.21	- 7829979.2	- 6351.93
24	6	- 0.73	0.53	14541	+ 7520.79	+ 56562282	- 5490.17
25	10	+ 3.27	10.69	28820	+ 21799.79	+ 47523084	+ 71285.31
26	6	- 0.73	0.53	1400	- 5620.21	- 31586760	+ 4102.75
27	3	- 3.73	13.91	2625	- 4395.21	- 19317870	+ 16394.13
28	4	- 2.73	7.45	2375	- 4645.21	- 21577975	+ 12681.42
29	9	+ 2.27	5.15	3692	- 3328.21	- 11076981	- 7555.03
30	5	- 1.73	2.99	1442	- 5578.21	- 31116426	+ 9650.30
31	7	+ 0.27	0.07	4570	- 2450.21	- 6003529	- 661.55
32	5	- 1.73	2.99	3100	- 2920.21	- 8527626.4	+ 5091.96
33	3	- 3.73	13.91	2625	- 4395.21	- 19317870	+ 16394.13
No.33	222		160.45	231667		68453308	16394.13
	6.73		12.66	7020.21		8273.65	xy= +086509.96

$$x = \frac{Exy}{\sqrt{E^2 \times Ey^2}}$$

$$\frac{86509.96}{12.66 \times 8273.65}$$

$$\frac{86509.96}{104744.41}$$

$r = + 0.82$

==========

$$\bar{Ex} = \frac{Ex}{N} = \frac{222}{33} = 6.73$$

$$\bar{Ey} = \frac{Ey}{N} = \frac{231667}{33} = 702021$$

==========

No	X		X^d	x^2	Y		$Y2^d$	Y^2		XY
1	7	+	0.27	0.07	4600	-	1060.64	1124957.2	-	286.37
2	9	+	2.27	5.15	10630	+	4969.36	24694538	+	11280.46
3	7	+	0.27	0.07	6590	+	929.36	863710.01	+	250.93
4	5	-	1.73	2.99	950	-	4710.64	22190129	+	8149.41
5	5	-	1.73	2.99	660	-	5000.64	25006400	+	8651.11
6	10	+	3.27	10.69	2770	-	2890.6	8355568.4	-	9452.26
7	9	+	2.27	5.15	1745	-	3915.04	15332237	-	8888.50
8	6	-	0.73	0.53	22800	+	17139.36	29375708	-	12511.73
9	8	+	1.27	1.61	750	-	4910.64	24114385	-	6236.51
10	9	+	2.27	5.15	14880	+	9219.36	84996599	+	20927.95
11	8	+	1.27	1.61	5070	-	590.64	348855.61	-	750.11
12	5	-	1.73	2.99	1860	-	3800.64	144448644	+	6575.11
13	5	-	1.73	2.99	24300	+	18639.36	34742508	-	32246.09
14	9	+	2.27	5.15	1305	-	4355.64	18971600	-	9887.30
15	5	-	1.73	2.99	5680	+	19.36	374.81	-	33.93
16	6	-	.73	0.53	7800	+	2139.36	4576861.2	-	156173.28
17	2	-	4.73	22.37	1820	-	3840.64	14750516	+	18166.23
18	10	+	3.27	10.69	2650	-	3010.64	9063953.2	-	9844.79
19	10	+	3.27	10.69	4510	-	1150.64	1323972.4	-	3762.59
20	7	+	0.27	0.07	1465	-	4195.64	17603395	-	1132.82
21	5	-	1.73	2.99	4920	-	740.64	548547.6	+	1281.31
22	8	+	1.;27	1.61	360.	-	5300.64	28096784	-	6731.81
23	9	+	2.27	5.15	3090	-	2570.64	6608190	-	5835.35
24	6	-	0.73	0.53	10750	+	5089.36	25901585	-	3715.23
25	10	+	3.27	10.69	20945	+	15284.36	23361166	+	49979.85
26	6	-	0.73	0.53	564	-	5096.64	25975739	+	3720.55
27	3	-	3.73	13.91	4000	-	1660.64	275772252	+	6194.18
28	4	-	2.73	7.45	1250	-	4410.64	19453745	+	12041.05
29	9	+	2.77	5.15	4337	-	1323.64	1752022.8	-	3004.66
30	5	-	1.73	2.99	1410	-	4250.64	18067940	+	7353.61
31	7	+	0.27	0.07	3700	-	1960.64	38441092	-	529.37
32	5	-	1.73	2.99	4640	-	1020.64	1041706	+	1765.71
33	3	-	3.73	13.91	4000	-	1660.64	2757725.2	+	6194.18
No.33	222			160.45	186801			55263508	+	162531.64
	6.73			12.66	5660.64			7433.94	-	116411.15

$XY + 46120.49$

$$r = \frac{E\,x\,y}{\sqrt{Ex^2 x\ Ey^2}}$$

$$\frac{46120.49}{12.66 \times 7433.94}$$

$$\frac{46120.49}{94113.68}$$

$r = + 0.49$

$$\bar{Ex} = \frac{Ex}{N} = \frac{222}{33} = 6.73$$

$$\bar{Ey} = \frac{Ey}{N} = \frac{186801}{33} = 5660.64$$

YEAR 1983-84

No.	X		x^d	X^2	Y		Y^d	Y^2		XY
1	7	+	0.27	0.07	1440	-	2788.09	- 7773445.8	+	752.78
2	9	+	2.27	5.15	7500	+	3271.91	+10705395	+	7427.23
3	7	+	0.27	0.07	5625	+	1396.91	+ 1951357.5	+	377.16
4	5	-	1.73	2.99	2160	-	2068.09	- 4276996.2	+	3577.79
5	5	-	1.73	2.90	710	-	3518.09	- 12376957	+	6086.29
6	10	+	3.27	10.69	2150	-	2078.09	- 4318458	-	6795.35
7	9	+	2.27	5.15	1600	-	2628.09	- 6906857	-	5965.76
8	6	-	0.73	0.53	15400	+	11171.91	+ 12481157	-	9155.49
9	8	+	1.27	1.61	530	-	3698.09	- 13675869	-	4696.57
10	9	+	2.27	5.15	9100	+	4871.91	+ 23735507	+	6187.32
11	8	+	1.27	1.61	4670	+	441.91	+ 195284.44	+	1003.13
12	5	-	1.73	2.99	1250	-	2978.09	- 88690.20	+	5152.09
13	5	-	1.73	2.99	9400	+	5171.91	+ 26748653	-	8947.40
14	9	+	2.27	5.15	1115	-	3113.09	- 9691329.3	-	7066.71
15	5	-	1.73	2.99	4540	+	311.91	+ 97287.85	-	708.03
16	6	-	0.73	0.73	6850	+	2621.91	+ 6874412	-	1913.99
17	2	-	4.73	22.37	2450	-	1778.09	- 3161604	+	8410.36
18	10	+	3.27	10.69	2320	-	1908.09	- 3640807.4	-	6239.45
19	10	+	3.27	10.69	3680	-	548.09	- 300402.64	-	1792.25
20	7	+	0.27	0.07	1860	-	2368.09	- 5607850.2	-	639.38
21	5	-	1.73	2.99	4200	-	28.09	- 789.04	+	748.59
22	8	+	1.27	1.61	360	-	3868.09	+ 14962120	-	4912.47
23	9	+	2.27	5.15	2360	-	1868.09	- 3489648.1	-	4240.56
24	6	-	0.73	0.53	17110	+	12881.91	+ 16594334	-	9403.79
25	10	+	3.27	10.69	16150	+	11921.91	+ 14213193	+	38984.64
26	6	-	0.73	0.53	570	-	3658.09	- 13381622	+	2670.40
27	3	-	3.73	13.91	1680	-	2548.09	- 6492762.6	+	9504.37
28	4	-	2.76	7.45	1480	-	2748.09	- 7551998.6	+	7502.28
29	9	+	2.27	5.15	3397	-	831.09	- 690710.58	-	1886.57
30	5	-	1.73	2.99	810	-	3418	- 11682724	+	5913.14
31	7	+	0.27	0.07	2140	-	2088.09	- 4360119.8	-	563.78
32	5	-	1.73	2.99	3240	-	988.09	- 976321.84	+	1709.39
33	3	-	3.73	13.91	1680	-	2548.09	- 6492762.6	+	9504.37
No.33	222			160.45	139527			264277.08	-	80766.62
	6.73			12.66	4228.09			16256.62	+	114058.55

$= + 33291.93$

$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$

$+ \frac{33291.93}{12.66 \times 5140.78}$

$+ \frac{33291.93}{65082.27}$

$r = 0.51$

$\bar{Ex} = \frac{EX}{N} = \frac{222}{33}$

$= 6.73$

$\bar{Ey} = \frac{Ey}{N} = \frac{139527}{33}$

$= 4228.09$

YEAR 1984-85

No	X	X^d	X^2	Y	Y	Y^d	Y^2	XY
1	7	+ .27	.07	1920	19.20	- 21.11	445.63	- 5.69
2	9	+ 2.27	5.15	4340	43.40	+ 3.09	9.54	+ 7.01
3	7	+ .27	.07	4950	49.50	+ 9.19	84.45	+ 2.48
4	5	- 1.73	2.99	2025	20.25	- 20.06	402.40	+ 34.70
5	5	- 1.73	2.99	700	7.00	- 31.31	1109.55	+ 57.62
6	10	+ 3.27	10.69	1745	17.45	- 22.86	552.57	- 74.75
7	9	+ 2.27	5.15	530	5.30	- 35.11	1232.71	- 79.69
8	6	- .73	.53	13430	13.43	- 26.88	722.53	+ 19.62
9	8	+ 1.27	1.61	570	5.70	- 34.61	1197.85	- 43.95
10	9	+ 2.27	5.15	4060	40.60	+ .29	0.08	+ .65
11	8	+ 1.27	1.61	4160	41.60	+ 1.29	1.66	+ 1.63
12	5	- 1.73	2.99	870.70	8.70	- 31.61	999.19	+ 54.68
13	5	- 1.73	2.99	6560	65.60	+ 25.29	639.58	- 43.75
14	9	+ 2.27	5.15	1110	11.10	- 29.21	853.22	- 66.30
15	5	- 1.73	2.99	2850	28.50	- 11.81	139.47	+ 20.43
16	6	- 0.73	.53	7710	77.10	+ 36.79	1353.50	- 26.85
17	2	- 4.73	22.37	2050	20.50	- 19.81	392.43	+ 93.70
18	10	+ 3.27	10.69	3050	30.50	- 9.81	96.23	- 32.07
19	10	+ 3.27	10.69	3183	31.83	- 8.48	71.91	- 27.72
20	7	+ 0.27	.07	4400	44.00	+ 3.69	13.61	+ 0.99
21	5	- 1.73	2.99	4860	48.60	+ 8.29	68.72	- 14.34
22	8	+ 1.27	1.61	1150	11.50	- 28.81	830.01	- 36.58
23	9	+ 2.27	5.15	850	8.50	- 31.81	1011.87	- 72.20
24	6	- 0.73	.53	15900	15.90	- 24.41	595.84	+ 17.81
25	10	+ 3.27	10.69	30940	30.94	- 9.37	87.79	- 30.63
26	6	- 0.73	0.53	366	3.66	- 36.71	1347.62	+ 26.79
27	3	- 3.73	13.91	1585	15.85	- 24.46	598.29	+ 91.23
28	4	- 2.73	7.45	1020	10.20	- 30.11	906.61	+ 84.93
29	9	+ 2.27	5.15	3932	39.32	- .99	.98	- 2.24
30	5	- 1.73	2.99	795	7.95	- 32.36	1047.16	+ 55.98
31	7	+ .27	.07	2032	20.32	- 11.99	399.60	- 3.23
32	5	- 1.73	2.99	2890	28.90	- 11.41	130.18	+ 19.73
33	3	- 3.73	13.91	1585	15.85	- 24.46	598.29	+ 91.23
X = 33	220.45		160.45	138118	133.26	18941.07		+ 681.21
	12.66		12.66	4185.39	40.31	1 137.63		- 559.99
							xy = +	121.22

$$Ex^- = \frac{Ex}{N} = \frac{222}{33} = 6.73$$

$$Ey^- = \frac{138118}{33} = 4185.39 \qquad \Sigma \bar{y} = \frac{\Sigma y}{N}$$

$$r = \frac{E\,xy}{\sqrt{Ex^2 \times Ey^2}} = \frac{121.22}{12.66 \times 137.63}$$

$$r = 0.06$$

SHIVAJI UNIVERSITY KOLHAPUR LIBRARY

No	X		X^d	X^2	Y		Y^d	Y^2	XY
1	7	+	0.27	.07	1845	-	1671.69	- 2794547.5	- 451.35
2	9	+	2.27	5.15	5215	+	1698.31	+ 2884256.9	+ 3855.16
3	7	+	0.27	.07	4765	+	1248.31	+ 1558277.9	+ 337.04
4	5	-	1.73	2.99	2025	-	1491.69	- 2225139.1	- 2580.62
5	5	-	1.73	2.99	560	-	2956.69	- 8742015.8	- 5115.07
6	10	+	3.27	10.69	1705	-	1811.69	- 3282220.7	- 5924.22
7	9	+	2.27	5.16	560	-	2956.69	- 8742015.8	- 6711.68
8	6	-	0.73	0.53	14575	+	11058.31	+ 12228608	+ 8072.56
9	8	+	1.27	1.61	675	-	2859.69	- 8177826.9	- 3631.80
10	9	+	2.27	5.15	--		--	--	--
11	8	+	1.27	1.61	6180	+	2663.31	+ 7093220.2	+ 3382.40
12	5	-	1.73	2.99	805	-	2711.69	- 7353262.7	- 4691.22
13	5	-	1.73	2.99	6920	+	3403.31	+ 11582519	+ 5887.72
14	9	+	2.27	5.15	890	-	2626.29	- 6897399.2	- 5961.67
15	5	-	1.73	2.99	3400	-	116.69	- 13616.55	- 201.87
16	6	-	0.73	0.53	9005	+	5488.31	+ 30121547	+ 4006.46
17	2	-	4.73	22.37	2955	-	561.69	- 315495.66	- 2656.79
18	10	+	3.27	10,69	6225	+	2708.31	+ 7334943.1	+ 8856.17
19	10	+	3.27	10.69	4565	+	1048.31	+ 1098953.9	+ 3427.97
20	7	+	0.27	0.07	5400	+	1883.31	+ 3546856.6	+ 508.49
21	5	-	1.73	2.99	625	-	2891.69	- 8361871.1	- 5002.62
22	8	+	1.27	1.61	780	-	2736.69	- 7489472.2	- 3475.59
23	9	+	2.27	5.15	--		--	--	--
24	6	-	0.73	0.53	6243	+	2726.31	+ 7432766.2	+ 1990.20
25	10	+	3.27	10.69	25110	+	21593.31	+ 46627108	+ 70610.12
26	6	-	0.73	0.53	483	-	3033.69	- 9203275	- 2214.59
27	3	-	3.73	13.91	800	-	2716.69	- 7380404.6	- 10133.25
28	4	-	2.73	7.45	770	-	2746.69	- 7544306	- 8498.46
29	9	+	2.27	5.15	--		--	--	--
30	5	-	1.73	2.99	210	-	3306.69	- 10934199	- 5720.57
31	7	+	0.27	0.07	1525	-	1991.69	- 3966829.1	- 537.75
32	5	-	1.73	2.99	435	-	3081.69	- 94968113.3	- 5331.32
33	3	-	3.73	13.91	800	-	2716.69	- 73804046	- 10133.54
No.33	222			160.45	116051			- 12030108	+ 110934.29
	6.73			12.66	3516.69				- 87973.98
								xy=	022960.31

$$r = \frac{E\,x\,y}{\sqrt{Ex^2 \times Ey^2}}$$

$$= \frac{-22960.31}{12.66 \times 5018.06}$$

$$= \frac{-22960.31}{63535.47}$$

$r = 0.36$

$$\bar{Ex} = \frac{Ex}{N} = \frac{222}{33}$$

$= 6.73$

$$\bar{Ey} = \frac{Ey}{N} = \frac{116051}{334}$$

$= 3516.69$

YEAR 1981-82

No.	X		X^d	X^2	Y		Y^d		Y^2		XY
1	20	+	4.30	18.49	7040	-	5559.06	-	30903148	-	23903.95
2	20	+	4.30	18.49	3890	-	8709.06	-	75847726	-	37448.95
3	18	+	2.30	5.29	6115	-	6484.06	-	42043034	-	14913.33
4	14	-	1.70	2.89	8275	-	4324.06	-	18697495	+	7350.90
5	17	+	1.30	1.69	10370	-	2229.06	-	4968708.5	-	2897.77
6	14	-	1.70	2.89	8740	-	3859.06	-	14892344	+	6560.40
7	19	+	3.30	10.89	29225	+	16625.94	+	27642108	+	54865.60
8	11	-	4.70	22.09	16180	+	3580.94	+	12823131	-	16830.41
9	12	-	3.70	13.69	31510	+	18910.94	+	35762308	-	69970.47
10	13	-	2.70	7.29	37425	+	24825.94	+	61632708	-	67030.03
11	20	+	4.30	18.49	14205	+	1605.94	+	2579043.3	+	6905.54
12	15	-	0.70	.49	16330	+	3730.94	+	13919913	-	2611.65
13	13	-	2.70	7.29	17790	+	5190.94	+	26945858	-	14015.53
14	14	-	1.70	2.89	5250	-	7349.06	-	54008683	+	12493.40
15	16	+	0.30	0.09	5355	-	7244.06	-	524764.05	-	2173.21
16	18	+	2.30	5.29	13905	+	1305.94	+	1705479.3	+	3003.66
17	15	-	0.70	0.49	28100	+	15500.94	+	24027908	-	10850.65
18	16	+	0.30	0.09	7640	-	4959.06	-	24592276	-	1487.71
19	15	-	0.70	0.49	12960	+	360.94	+	130277.68	-	252.65
20	13	-	2.70	7.29	7050	-	5549.06	-	30792067	+	14982.46
21	13	-	2.70	7.29	8655	-	3944.06	-	15555609	+	10648.96
22	15	-	0.70	0.49	6000	-	6599.06	-	43547593	+	4619.34
23	19	+	3.30	10.89	6290	-	6309.06	-	39804238	-	20819.89
24	16	+	0.30	0.09	4150	-	8449.06	-	71386615	-	2534.71
25	15	-	0.70	0.49	1825	-	10774.06	-	1160808	+	7541.84
26	20	+	4.30	18.49	7375	-	5224.06	-	27290803	-	22463.45
27	20	+	4.30	18.49	10500	-	2099.06	-	4406052.9	-	9025.95
28	15	-	0.70	0.49	2380	-	10219.06	-	10442908	+	7153.34
29	13	-	2.70	7.29	21782	+	9182.94	+	84326387	-	24793.93
30	11	-	4.70	22.09	13545	+	945.94	+	894802.48	-	4445.91
31	17	+	1.30	1.69	20714	+	8114.94	+	65852251	+	10549.42
No.31	487			234.19	390571				92105308	-	348469.64
	15.70			15.30	12599.06				30348.95	+	146674.86
										-	201794.78

$Xt = -201794.78$

$$r = \frac{\Sigma x y}{\sqrt{Ex^2 \times Ey^2}}$$

$$= \frac{-201794.78}{15 \times 30 \times 30348.95}$$

$$= \frac{-201794.78}{464338.94}$$

$r = 0.43$

$$\bar{Ex} = \frac{Ex}{N} = \frac{487}{31}$$

$= 15.70$

$$\bar{Ey} = \frac{Ey}{N} = \frac{390571}{31}$$

$= 12599.06$

No.	X		X^d	X^2	Y		Y^d	Y^2		XY
1	20	+	4.30	18.49	7457	-	4081.13	16655622	-	17548.85
2	20	+	4.30	18.49	7220	-	4318.13	18646247	-	18567.95
3	18	+	2.30	5.29	3780	-	7758.13	60188581	-	17843.69
4	14	-	1.70	2.89	9730	-	1808.13	32693341	+	3073.82
5	17	+	1.30	1.69	9500	-	2038.13	4153973.9	-	2649.56
6	14	-	1.70	2.89	6980	-	4558.13	20776549	+	7748.82
7	19	+	3.30	10.89	18440	+	6901.87	47635809	+	22776.17
8	11	-	4.70	22.09	16020	+	4481.87	20087159	-	21064.78
9	12	-	3.70	13.69	29630	+	18091.87	32731508	-	6693.91
10	13	-	2.70	7.29	32440	+	20901.87	43688808	-	56435.04
11	20	+	4.30	18.49	10310	-	1228.13	1508303.3	-	5280.95
12	15	-	0.70	0.49	14200	+	2661.87	70855511.9	-	1863.30
13	13	-	2.70	7.29	12605	+	1066.87	1138211.6	-	2880.54
14	14	-	1.70	2.89	23440	+	11901.87	14165408	-	20233.17
15	16	+	0.30	0.09	5440	-	6098.13	371871.89	-	1829.43
16	18	+	2.30	5.29	11420	-	118.13	13954.69	-	271.70
17	15	-	0.70	0.49	26070	+	14531.87	21117508	-	10172.30
18	16	+	0.30	0.09	5340	-	6198.13	38416815	-	1859.43
19	15	-	0.70	0.49	13005	+	1466.87	2151707.6	-	1026.80
20	13	-	2.70	7.29	6240	-	5298.13	28070181	+	14304.95
21	13	=	2.70	7.29	5990	-	5548.13	30781746	+	14979.96
22	15	-	0.70	0.49	5925	-	6413.13	41128236	+	4489.19
23	19	+	3.30	10.89	2125	-	9413.13	88607016	-	31063.32
24	16	+	0.30	0.09	3560	-	7978.13	63650558	-	2393.43
25	15	-	0.70	0.49	1470	-	10068.13	10136708	+	7047.69
26	20	+	4.30	18.49	6080	-	5458.13	29791183	-	23469.95
27	20	+	4.30	18.49	5640	-	5898.13	34787937	-	2536.95
28	15	-	0.70	0.49	1955	-	9583.13	91836381	+	6708.19
29	13	-	2.70	7.29	24916	+	13377.87	17896708	-	36120.24
30	11	-	4.70	22.09	13290	+	1751.87	30690485	-	8233.78
31	17	+	1.30	1.69	18264	+	6725.87	45237327	+	8743.63
No.31	487			234.19	357682			90503508	-	373050.07
	15.70			15.30	11538.13			30083.80	+	89872.41

$xy = 283177.66$

$$r = \frac{E\,x\,y}{\sqrt{Ex^2 \times Ey^2}}$$

$$- \frac{283177.66}{15.30 \times 30083.80}$$

$$- \frac{283177.66}{460282.14}$$

$r = 0.61$

$$\bar{Ex} = \frac{Ex}{N} = \frac{487}{31}$$

$\bar{x} = 15.70$

$$\bar{Ey} = \frac{Ey}{N} = \frac{357682}{31}$$

$= 1538.13$

YEAR 1983-84

No	X		X^d	X^2	Y		Y^d	Y^2		XY
1	20	+	4.30	18.49	4980	-	4587.58	21045890	-	191726.59
2	20	+	4.30	18.49	5930	-	3637.58	13231988	-	15641.59
3	18	+	2.30	5.29	3650	-	5917.58	35017753	-	13610.43
4	14	-	1.70	2.89	5350	-	4217.58	17787981	+	7169.88
5	17	+	1.30	1.69	8240	-	1327.58	1762468.7	-	1725.85
6	14	-	1.70	2.89	5800	-	3767.58	14194659	+	6404.88
7	19	+	3.30	10.89	9970	+	402.42	161941.86	+	1327.98
8	11	-	4.70	22.09	4800	-	4767.58	22729819	+	22407.62
9	12	-	3.70	13.69	22150	+	12582.42	15831708	-	46554.95
10-	13	-	2.70	7.29	15513	+	5945.42	35348019	-	16052.63
11	20	+	4.30	18.49	4300	-	5267.58	27747399	-	22650.59
12	15	-	0.70	0.49	13550	+	3982.42	15859669	-	2787.69
13	13	-	2.70	7.29	11010	+	1442.42	2080575.5	-	3894.53
14	14	-	1.70	2.89	23450	+	13882.42	19272108	-	23600.11
15	16	+	0.30	0.09	12920	+	3352.42	11238720	+	1005.72
16	18	+	2.30	5.29	9870	+	302.42	91457.85	+	695.56
17	15	-	0.70	0.49	26970	+	17402.42	30284408	-	12181.69
18	16	+	0.30	0.09	5925	-	3642.58	13268389		1092.77
19	15	-	0.70	0.49	13710	+	4142.42	17159643	-	2899.69
20	13	+	2.70	6300.29	6300	-	3267.58	10677079	+	8822.46
21	13	-	2.70	7.29	6430	-	3137.58	9844408.3	+	8471.46
22	15	-	0.70	0.49	4981	-	4586.58	21036716	+	3210.60
23	19	+	3.30	10.89	2220	-	734758	53986932	-	24247.01
24	16	+	0.30	0.09	2240	-	7327.58	53693429	-	2198.27
25	15	-	0.70	0.49	1587	-	7980.58	63689657	+	5586.40
26	20	+	4.30	18.49	4750	-	4817.58	23209077	-	20715.59
27	20	+	4.30	18.49	87.90	-	597.58	357101.86	-	2569.59
28	15	+	0.70	0.49	2025	-	7542.58	56890513	+	5279.80
29	13	-	2.70	7.29	20840	+	11272.42	12706708	-	30435.53
30	11	-	4.70	22.09	11742	+	2174.42	47281023	-	10219.77
31	17	+	1.30	1.69	16422	+	6854.42	46983074	+	8910.74
No.31	487			334.19	296595			67191608	-	272804.87
	15.70			15.30	9567.58			25921.36	+	79293.1

$- xy = 193511.77$

$r = \frac{E\,x\,y}{\sqrt{Ex^2 x Ey^2}}$

$- \frac{193511.77}{15.30 \times 25921.36}$

$- \frac{193511.77}{396596.81}$

$r = 0.487$

$\bar{Ex} = \frac{Ex}{N} = \frac{487}{31}$

$= 15.70$

$\bar{Ey} = \frac{Ey}{N} = \frac{296595}{31}$

$= 9567.58$

YEAR 1984-85

No	X		X^d	X^2	Y		Y^d	Y^2		XY
1	20	+	4.30	18.49	4820	-	5313.94	28237958	-	22849.94
2	20	+	4.30	18.49	4805	-	5328.94	28397602	-	22914.44
3	18	+	2.30	5.29	3660	-	6473.94	41911899	-	14890.06
4	14	-	1.70	2.89	4040	-	6093.94	37136105	+	10359.69
5	17	+	1.30	1.69	6825	-	3308.94	10949084	-	4301.62
6	14	-	1.70	2.89	5160	-	4973.94	24740079	+	8455.69
7	19	+	3.30	10.89	4270	-	5863.94	34385792	-	19351.00
8	11	-	4.70	22.09	2250	-	7883.94	62156510	+	37054.51
9	12	-	3.70	13.69	22250	+	12116.06	14679808	-	44829.42
10	13	-	2.70	7.29	22790	+	12656.06	16017508	-	34171.36
11	20	+	4.30	18.49	4015	-	6118.94	37441427	-	26311.44
12	16	-	0.70	0.49	15230	+	5096.06	25969828	-	3567.24
13	13	-	2.70	7.29	10460	+	326.06	106315.12	-	880.36
14	14	-	1.70	2.89	16995	+	6861.06	47074144	-	11663.80
15	16	+	0.30	0.89	16400	+	6266.06	39263508	+	1879.81
16	18	-	2.30	5.29	23805	+	13671.06	18689708	+	31443.43
17	15	-	0.70	0.49	25850	+	15716.06	24699408	-	11001.24
18	16	+	0.30	0.09	6135	-	3998.94	15991521	-	1199.68
19	15	-	0.70	0.49	18500	+	8366.06	69990960	-	5856.24
20	13	-	2.70	7.29	4556	-	5577.94	31113415	+	15060.43
21	13	-	2.70	7.29	4880	-	5253.94	27603886	+	14185.63
22	15	-	0.70	0.49	4925	-	5208.94	27133056	+	3646.25
23	19	+	3.30	10.89	310	-	9823.94	96509797	-	32419.00
24	16	+	0.30	0.09	1820	-	8313.94	69121598	-	2494.18
25	15	-	0.70	0.49	1140	-	8993.94	80890957	+	6295.75
26	20	+	4.30	18.49	4070	-	6063.94	36771368	-	26074.94
27	20	+	4.30	18.49	8390	-	1743.94	3041326.7	-	7498.94
28	15	-	0.70	0.49	27065	+	16931.06	2866608	-	11851.74
29	13	-	2.70	7.29	16272	+	6138.06	37675781	-	16572.76
30	11	-	4.70	22.09	9492	-	641.94	412086.96	+	2077.11
31	17	+	1.30	1.69	12972	+	2838.06	8054584.6	+	3689.47
No.31	487			234.19	314152			940512.08	-	387699.4
	15.70			15.30	10133.94			30667.78		134147.77

$xy = 253551.63$

$$r = \frac{E\,x\,y}{\sqrt{Ex^2 x Wy^2}}$$

$$\frac{253551.62}{469217.0}$$

15.30×30667.78

$$-\frac{253551.63}{469217.03}$$

$r = 0.54$

$\bar{Ex} = \frac{Ex}{N} \quad \frac{487}{31}$

$= 15.70$

$\bar{Ey} \quad \frac{Ey}{N} \quad \frac{314152}{31}$

$= 10133.94$

YEAR 1985-86

No	X		X^d	X^2	Y		Y^d	Y^2		XY
1	20	+	4.30	18.49	4325	-	6629.16	43945762	-	28505.38
2	20	+	4.30	18.49	3995	-	6959.16	484299.08	-	2994.38
3	18	+	2.30	5.29	4005	-	6949.16	48290825	-	15983.06
4	14	-	1.70	2.89	3775	-	7179.16	51540338	+	12204.57
5	17	+	1.30	1.60	4120	-	6834.16	46705743	-	8884.40
6	14	-	1.70	2.89	5025	-	5929.16	35154938	+	10079.57
7	19	+	3.30	10.89	1050	-	9904.16	98092385	-	32683.72
811	11	-	4.70	22.00	840	-	10114.16	10229608	+	47536.55
9	12	-	3.70	13.69	20460	+	9505.84	90360994	-	35171.60
10	13	-	2.70	7.29	8850	-	2104.16	44274893	+	5681.23
11	20	+	4.30	18.40	4070	-	6884.16	47391659	-	29601.88
12	15	-	0.70	0.49	10225	-	729.16	531674.31	+	510.41
13	13	-	2.70	7.29	10310	-	644.16	414942.11	+	1739.23
14	14	-	1.70	2.89	62365	+	51410.84	264307.09	-	87398.42
15	16	+	0.30	0.09	12940	+	1985.84	3943560.5	+	595.75
16	18	+	2.30	5.29	36105	+	25150.84	63256408	+	57846.93
17	15	-	0.70	0.49	28450	+	17495.84	30610408	-	12247.08
18	16	+	0.30	0.09	6747	-	4207.16	17700195	-	1262.14
19	15	-	0.70	0.49	17015	+	6060.84	36733782	-	4242.58
20	13	-	2.70	7.29	4200	-	6754.16	456186.77	+	18236.23
21	13	-	2.70	7.29	4283	-	6671.16	44504376	+	18012.13
22	15	-	0.70	0.49	6025	-	4929.16	24296618	+	3450.41
23	19	+	3.30	10.89	225	-	10729.16	11511408	-	35406.22
24	16	+	0.30	0.09	1229	-	9725.16	94578737	-	2917.54
25	15	-	0.70	0.49	885	-	10069.16	10138708	+	7048.41
26	20	+	4.30	18.49	3365	-	7589.16	57595350	-	32633.38
27	20	+	4.30	18.49	13390	+	2435.84	59333165	+	10474.11
28	15	-	0.70	0.49	31775	+	20820.84	43350078	-	14574.58
29	13	-	2.70	7.29	11684	+	729.84	532666.43	-	1970.56
30	11	-	4.70	22.09	7558	-	3396.16	11533903	+	15961.95
31	17	+	1.30	1.69	10288	-	666.16	443769.15	-	866.00
No.31	487			334.19	339579			11430909	-	374272.92
	15.70			15.30	10954.16			33809.71	+	209377.48
								Xy =		164895.44

Xy = 164895.44

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$- \frac{164895.44}{15.30 \times 33809.71}$$

$$- \frac{164895.44}{517288.56}$$

r = 0.31

$$\bar{Ex} = \frac{Ex}{N} = \frac{487}{31}$$

= 15.70

$$\bar{Ey} = \frac{Ey}{N} = \frac{3395.79}{31}$$

= 10954.16

No	X		X^d	X^2	Y		Y^d	Y^2		XY
1	23	-	4.28	18.31	26075	+	7067.19	499451.74	-	30247.57
2.	23	-	2.28	5.19	10315	-	8694.81	75599721	+	19824.16
3	21	-	4.28	18.31	22355	+	3347.19	11203681	-	14325.97
4.	30	+	4.72	22.27	19895	+	887.19	787106.1	+	4187.53
5	25	-	0.28	0.07	14400	-	4607.81	21231913	+	1290.18
6	22	-	3.28	10.75	15680	-	3324.81	11054362	+	10905.37
7	25	-	0.28	0.07	4765	-	14242.81	20285708	+	3987.98
8	22	-	3.28	10.75	28270	+	9262.19	85788164	-	30379.98
9	25	-	0.28	0.07	36667	+	17659.19	31184608	-	4944.57
10	23	-	2.28	5.19	3375	-	15632.81	24438408	+	35642.80
11	25	-	0.28	0.07	61960	+	42952.19	18448909	-	12026.61
12	30	+	4.72	22.27	7275	-	11732.81	13765808	-	55378.86
13	30	+	4.72	22.27	33400	+	14392.19	20713508	+	67931.13
14	22	-	3.28	10.75	24595	+	5587.19	31216692	-	18325.98
15	23	-	2.28	5.19	2250	-	16757.81	28082408	+	38207.80
16	28	+	2.72	7.39	10600	-	8407.81	70691269	-	22869.24
17	28	+	2.72	7.39	11460	-	7547.81	56969436	-	20530.04
18	27	+	1.72	2.95	13960	-	5047.81	25480386	-	8682.23
19	25	-	0.28	0.07	2785	-	16222.81	26317908	+	4542.38
20	29	+	3.72	13.83	21785	+	2777,;.19	7712784.3	+	10331.14
21	27	+	1.72	2.95	27297	+	8289.19	68710671	+	14257.07
No_{21}	531			186.11	399164			69962808	-	217710.99
				13.64				26450.49	+	211107.54
									xy = -	6603.43

$$- \frac{6603.43}{13.64 \times 26450.49}$$

$$- \frac{6603.43}{360784.68}$$

r= 0.01

$$r = \frac{\Sigma xy}{\Sigma x^2 \times \Sigma y^2}$$

$E\bar{x} = \frac{x}{N}$ $\qquad$ $E\bar{y} = \frac{Y}{N}$

$\frac{531}{21}$ $\qquad$ $\frac{399164}{21}$

$\bar{x} = 25.28$ $\qquad$ $\bar{y} = 19007.81$

YEAR 1982-83

No	X		X^d	X^2	Y		Y^d	Y^2		XY
1	21	-	4.28	18.31	26525	+	11336.19	12850908	-	48518.89
2	23	-	2.28	5.19	8090	-	7098.81	50393103	-	16185.28
3	21	-	4.28	18.31	14660	-	528.81	279640.02	+	2263.30
4	30	+	4.72	22.27	13590	-	1598.81	2556193.4	-	7546.38
5	25	-	.28	.07	12220	-	2968.81	8813832.8	+	831.26
6	22	-	3.28	10.75	13020	-	2168.81	4703736.8	+	7113.69
7	25	-	.28	.07	4920	-	10268.81	1054480.8	+	2875.26
8	22	-	3.28	10.75	13160	-	2028.81	4116071	+	6654.49
9	25	-	.28	.07	39590	+	24401.19	59541808	-	6832.33
10	23	-	2.28	5.19	4860	-	10328.81	10668408	+	23549.68
11	25	-	.28	.07	55490	+	40301.19	16241809	-	11284.33
12	30	+	4.72	22.27	1710	-	13478.81	18167808	-	63619.98
13	30	+	4.72	22.27	40325	+	25136.19	63182808	+	118642.82
14	22	-	3.28	10.75	10510	-	4678.81	21891263	+	15346.49
15	23	-	2.28	5.19	1630	-	13558.81	18384108	+	30914.08
16	28	+	2.72	7.39	9210	-	5978.81	35746169	-	16262.36
17	28	+	2.72	7.39	11595	-	3593.81	12915470	-	9775.16
18	27	+	1.72	2.95	11670	-	3518.81	12382024	-	6052.35
19	25	-	.28	.07	3745	-	114343.81	1309608	+	3204.26
20	29	+	3.72	13.83	17590	+	2401.19	5765713.4	+	8932.42
21	27	+	1.72	2.95	4855	-	10333.81	106787.08	-	17774.15
No.21	531			186.11	318965			41818408	-	187665.93
				13.64				6466.71	+	236513.02
					Ey= 318965					
								Xy	+	488471

$\bar{Ex} = \frac{x}{N}$

$= \frac{531}{21}$

$= 25.28$

$\bar{Ey} = \frac{Y}{N}$

$= \frac{318965}{21}$

$= 1588.81$

$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$

$r = \frac{48847.1}{13.64 \times 6466.71}$

$\frac{48847.1}{88205.92}$

$r = +0.55$

YEAR 1983-84

No.	X		X^d	X^2	Y		Y^d	Y^2		XY
1	21	-	4.28	18.31	30500	+	16281.81	26509708	-	6968615
2	23	=	2.28	5.14	7100	-	7118.19	50668629	+	16229.47
3	21	-	4.28	18.31	13660	-	558.19	311576.08	+	2389.05
4	30	+	4.72	22.27	10790	-	3428.19	11752487	-	16181.05
5	25	-	.28	.07	9900	-	4318.19	18646765	+	1209.09
6	22	-	3.28	10.75	12090	-	2128.19	4529192.7	+	6980.46
7	25	-	.28	..07	2975	-	11243.19	12640908	+	3148.09
8	22	-	3.28	10.75	10400	-	3818.19	14578575	+	12523.66
9	25	-	.28	.07	41715	+	27496.81	75607408	-	7699.11
10	23	-	2.28	5.19	3600	-	10618.19	11274508	+	24209.47
11	25	-	.28	.07	55400	+	41181.81	16959409	-	11530.91
12	30	+	4.72	22.27	4950	-	9268.19	85899346	-	43745.85
13	30	+	4.72	22.27	33150	+	18931.81	35841308	+	89358.14
14	22	-	3.28	10.75	16050	+	1831.81	3355527.9	-	6008.34
15	23	-	2.28	5.19	1430	-	12788.19	16353708	+	29157.07
16	28	+	2.72	7.39	9580	-	4638.19	21512806	-	12615.87
17	28	+	2.72	7.39	6085	-	8133.19	66148780	-	22122.27
18	27	+	1.72	2.95	9000	-	5218.19	27229507	-	8975.28
19	25	-	.28	.07	4150	-	10068.19	101368.08	+	2819.09
20	29	+	3.72	13.83	10567	-	3651.19	13331188	-	13582.43
21	27	+	1.72	2.95	5490	-	8728.19	76181301	-	15012.48
No	531			186.11	298582			58895208	-	227159.74
21				13.64				24268.34	+	188023.59
										3913615

$\bar{Ex} = \frac{X}{N}$

$\frac{531}{21}$

$= 25.28$

$\bar{Ey} = \frac{Ey}{N}$

$\frac{298582}{21}$

14218.19

$xy =$

$\frac{39136.15}{13.64 \times 39136.15}$

$\frac{39136.15}{533817.09}$

$r = -0.07$

$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \times \Sigma y^2}}$

YEAR 1984-85

21 to 30

NO	X	X^d	X^2	Y	Y^d	Y^2	XY
1	21	- 4.28	18.31	26880	+ 12233.05	14964708	- 2577.45
2	23	- 2.28	5.19	7950	- 6696.95	44849139	+ 15269.05
3	21	- 4.28	18.31	13545	- 1101.95	12142938	+ 4716.35
4	30	+ 4.72	22.27	8955	- 5691.95	32398295	- 26866.00
5	25	- .28	.07	5965	- 8681.95	75374519	+ 2430.68
6	22	- 3.28	10.75	106.70	- 3976.95	158116131	+ 13044.39
7	25	- .28	.07	2705	- 19941.95	39768108	+ 5583.75
8	22	- 3.28	10.75	5420	- 9226.95	85136606	+ 30264.39
9	25	- .28	.07	7519	- 7127.95	50807671	+ 1995.83
10	23	- 2.28	5.19	4250	- 10396.95	10809608	+ 23705.05
11	25	- .28	.07	147195	+ 132548.05	17568910	- 37113.45
12	30	+ 4.72	22.27	4900	- 9746.95	95003034	- 37113.45
13	30	+ 4.72	22.27	9765	- 4881.95	33833436	- 23042.80
14	22	- 3.28	10.75	13495	- 1151.95	13269888	+ 3778.39
15	23	- 2.28	5.19	1440	- 13206.95	17442308	+ 30111.85
16	28	+ 2.72	7.39	5595	- 9051.95	81937799	- 24621.30
17	28	+ 2.72	7.39	3520	- 11126.95	12380908	- 30265.30
18	27	+ 1.72	2.95	11560	- 3086.95	95292603	- 5309.55
19	25	- .28	.07	2720	- 11926.95	14225208	+ 3339.55
20	29	+ 3.72	13.83	9077	- 5569.95	31024343	- 77032.41
21	27	+ 1.72	2.95	4460	- 10186.95	10377308	- 17521.55
No.21	531		186.11	307586		70671708	- 281146.26
			13.64			26584.15	+ 134239.28
						xy =	- 147223.98

$$E\bar{x} = \frac{\Sigma X}{N}$$

$$\frac{531}{21}$$

$$\bar{x} = 25.28$$

$$E\bar{y} = \frac{Ey}{N}$$

$$\frac{307586}{21}$$

$$= \bar{y} = 14646.95$$

- 147223.98

13.64 x 26584.15

- 147223.98

362607.81

r = 0.40

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \times \Sigma y^2}}$$

YEAR 1985-86

NO	X		X^d	X^2	Y		Y^d	Y^2		XY
1	21	-	4.28	18.31	26425	+	3661.55	13404019	-	15669.72
2	23	-	2.28	5.19	7645	-	71178.85	50664286	+	48287.77
3	21	-	4.28	18.31	7813	-	16950.85	28733131	+	72249.63
4	30	+	4.72	22.27	10665	-	14098.85	19877757	-	66546.57
5	25	-	.28	.07	5975	-	18788.85	35302088	+	5260.87
6	22	-	3.28	10.75	8825	-	15938.85	25404693	+	52279.42
7	25	-	.28	.07	1716	-	23047.85	53120338	+	6453.39
8	22	-	3.28	10.75	2410	-	22353.85	49969460	+	73320.62
9	25	-	.28	.07	60235	+	35471.15	12582024	-	9931.92
10	23	-	2.28	5.19	7850	-	16913.85	28607832	+	38563.57
11	25	-	.28	.07	268450	+	243686.15	59382939	-	68232.12
12	30	+	4.72	22.27	-	-		-		
13	30	+	4.72	22.27	70782	+	45918.15	21084764	+	21673.66
14	22	-	3.28	10.75	14805	-	9958.85	99178693	+	32665.02
15	23	-	2.28	5.19	-		-	-		-
16	28	+	2.72	7.39	1055	-	23708.85	56210956	-	64488.07
17	28	+	2.72	7.39	1150	-	23613.85	55761391	-	64229.67
18	27	+	1.72	2.95	8640	-	16123.85	25997853	-	27733.02
19	25	-	.28	.07	2745	-	22048.85	48615178	+	6173.67
20	29	+	3.72	13.83	7285	-	17478.85	30551019	-	65021.32
21	27	+	1.72	2.95	3670	-	21093.85	44495050	-	36281.42
No.;21	531			186.11	520041			22133608	-	418133.83
				13.64				14877.36		356927.62

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$- \frac{61206.21}{13x64 \times 14877.36}$$

$$= \frac{-61206.21}{202927.19}$$

$$r = -0301$$

xy=-61206.21

$$\bar{x} = \frac{\Sigma x}{N}$$

$$\frac{531}{21}$$

25.28

$$\bar{Ey} = \frac{Ey}{N}$$

$$Ex = \frac{520041}{21}$$

$$\bar{y} = 24763.85$$

Year 1981-1982

No.	x	x^d	x^2	y	y^d	y^2	xy
1	33	- 1.76	3.09	39365	+ 9092.59	82675193	- 16002.95
2	3535	+ .24	0.05	31825	+ 1552.59	24105357	+ 372.62
3	34	- .76	0.57	43765	+ 13492.59	18204908	- 10254.37
4	34	- .76	0.57	37940	+ 7667.59	58791936	- 5827.37
5	38	+ 3.24	10.49	34615	+ 4342.59	18858088	+ 14069.99
6	33	- 1.76	3.09	42970	+ 12697.59	16122808	- 22347.75
7	40	+ 5.24	27.46	60760	+ 30487.59	92949308	+ 159754.97
8	37	+ 2.24	5.01	37250	+ 6977.59	48686762	+ 15629.80
9	31	- 376	14.14	10770	- 19502.41	38034408	+ 73329.06
10	35	+ .24	0.05	14230	- 16042.41	25735808	- 3850.17
11	33	- 1.76	3.09	33510	+ 3237.59	10481989	- 5698.15
12	37	+ 2.24	5.01	38750	+ 8477.59	71869532	+ 18989.80
13	33	- 1.76	3.09	39365	+ 9092.59	82675193	- 16002.95
14	35	+ .24	0.05	10500	- 19772.41	39094808	- 4745.37
15	31	- 3.76	14.14	2235	- 28037.41	78609608	+ 105420.66
16	40	+ 5.24	24.45	21989	- 8283.41	68614881	- 43405.06
17	32	- 2.76	7.62	14792	- 15480.41	23964308	+ 42725.93
	591					7777808	- 128134.14
	34.76	124.97	124.97	514631		2788871	- 430292.83
			11.17	30272.41		xy =	+ 302158.69

No.

17 $r = \frac{\Sigma x y}{\sqrt{\Sigma x^2 \times \Sigma y^2}}$

$xy = + 302158.69$

$\frac{302158.69}{11.17 \times 27888.71}$

$\frac{302158.69}{311516.89}$

$\bar{Ex} = \frac{Ex}{N} = \frac{124.97}{17}$

$= 34.76$

$\bar{Ey} = \frac{Ey}{N} = \frac{514631}{17}$

$= 30272.41$

$r = + 0.96$

YEAR 1982-1983

No.	x		x^d	x^2	y		y^d	y^2		xy
1	33	-	1.76	3.09	17.53	-	14.74	217.27	+	25.94
2	35	+	.24	.05	25.12	-	7.15	51.12	-	7.72
3	34	-	.76	.57	30.31	-	1.96	3.84	+	1.49
4	34	-	.76	.57	35.99	+	3.72	13.84	-	2.83
5	38	+	3.24	10.49	28.90	-	3.37	11.36	=	10.92
6	33	-	1.76	3.09	31.41	-	0.86	0.74	+	1.51
7	40	+	5.24	27.46	41.76	+	9.49	90.07	+	49.73
8	37	+	2.24	5.01	26.72	-	5.55	30.80	-	12.43
9	31	-	3.76	14.14	85.70	+	53.43	2854.76	-	200.90
10	35	+	.24	0.05	11.29	-	20.98	440.16	-	5.00
11	33	-	1.76	3.09	23.60	-	8.67	75.17	+	15.26
12	37	+	2.24	5.01	31.98	-	0.29	0.08	-	0.65
13	33	-	1.76	3.09	17.53	-	14.74	217.27	-	25.94
14	35	+	.24	0.05	84.00	+	51.73	2675.99	+	12.41
15	31	-	3.76	14.14	18.55	-	13.72	188.24	+	51.59
16	40	+	5.24	27.45	25.19	-	7.08	50.13	-	26 .09
17	32	-	2.76	7.62	13.12	-	19.15	366.72	+	52.85
No	591			124.97	548.7			7287.56	-	286.51
17	34.76			11.17	32.27				+	210.78
									-	75.73

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$= \frac{75.73}{\sqrt{11.17 \times 7287.56}}$$

$$= \frac{75.73}{11.17 \times 85.37}$$

$$= 0.07$$

$$\bar{Ex} = \frac{Ex}{N} = \frac{591}{17}$$

$$\bar{x} = 34.76$$

$$\bar{Ey} = \frac{Ey}{N} = \frac{548.7}{17}$$

$$\bar{y} = 32.27$$

YEAR 1983-84

No.	x		x^d	x^2	y		y^d	y^2		xy
1	33	-	1.76	3.09	19.91	-	20.9	436.81	+	36.78
2	35	+	.24	.05	22.18	-	18.63	347.08	-	4.47
3	34	-	.76	.57	36.20	-	4.61	21.25	+	3.50
4	36	-	.76	.57	22.75	-	19.06	384.16	+	14.48
5	38	+	3.24	10.49	23.30	-	18.57	342.62	-	59.97
6	33	-	1.76	3.09	28.52	-	13.92	176.62	+	24.50
7	40	+	5.24	27.46	70.15	+	28.34	803.15	+	148.50
8	37	+	2.24	5.01	21.99	-	19.82	392.83	-	44.40
9	31	-	3.76	14.14	81.50	+	39.69	1575.30	-	149.23
10	35	+	.24	0.05	79.05	+	37.24	1386.82	+	8.94
11	33	-	1.76	3.09	31.27	=	10.54	111.09	+	18.55
12	37	+	2.24	5.01	31.02	-	10.79	116.42	-	24.17
13	33	-	1.76	3.09	19.91	-	21.09	479.61	+	37.19
14	35	+	.24	0.05	65.00	+	23.19	537.78	+	5.56
15	31	-	3.76	14.14	19.20	-	22.61	511.21	+	85.01
16	40	+	5.24	27.45	20.97	-	20.84	434.30	-	109.20
17	32	-	2.76	7.62	10.79	-	31.02	962.24	+	85.61
No	591			124.97	693.8			9020.01		
17	34.76			11.17	40.81					
									+	468.62
									-	391.14
								xt =	+	77.18

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$Ex = \frac{Ex}{N} = \frac{591}{17} = 34.76$$

$$Ey = \frac{Ey}{N} = \frac{693.8}{17} = 40.81$$

$$\frac{}{\sqrt{124.97 \times 9020.01}}$$

$$\frac{}{11.17 \times 94.97} = \frac{77.18}{1060.81}$$

$$= 0.07$$

YEAR 1984-1985

31 to 40

No.	x		x^d	x^2	y		y^d	y^2		xy
1	33	-	1.76	3.09	13.57	-	13.33	177.68	+	23.46
2	35	+	.24	.05	13.49	-	13.41	179.83	-	3.22
3	34	-	.76	.57	25.03	-	1.87	3.49	+	1.42
4	34	-	.76	.57	21.87	-	5.03	25.30	+	3.82
5	38	+	3.24	10.49	21.56	-	5.34	28.51	-	17.30
6	33	-	1.76	3.09	23.97	-	2.93	8.58	+	5.15
7	40	+	5.24	27.46	49.10	+	22.02	492.84	+	604.66
8	37	+	2.24	5.01	20.99	-	5.91	34.93	-	13.24
9	31	-	3.76	14.14	78.20	+	51.03	2631.69	-	192.88
10	35	+	.24	.05	55.87	+	28.97	839.26	+	6.95
11	33	-	1.76	3.09	16.86	-	10.04	100.80	+	17.67
12	37	+	2.24	5.01	26.88	-	0.02	0.00	-	0.04
13	33	-	1.76	3.09	13.57	-	13.33	177.68	+	23.46
14	35	+	.24	.05	35.00	+	8.00	65.61	+	1.94
15	31	-	3.76	14.14	16.30	-	10.06	112.36	+	39.85
16	40	+	5.24	27.45	14.73	-	12.17	148.11	-	63.77
17	32	-	2.76	7.62	10.33	-	16.57	274.56	+	43.73
No	591			124.97	457.32			5301.23	+	772.11
17	34.76			11.17	26.90			72.81	-	290.45
								xy =	+	481.66

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$r = \frac{481.66}{11.17 \times 72.81} = \frac{481.66}{813.28}$$

$$\bar{Ex} = \frac{Ex}{N} = \frac{591}{17}$$

$$x = 34.76$$

$$\bar{Ey} = \frac{Ey}{N} = \frac{47.32}{17}$$

$$y = 26.90$$

r= 0.59

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YEAR 1985-86

31 to 40

No;	x	x^d	x^2	y	y^d	y^2	xy
1	33	- 1.76	3.09	50.10	+ 15.43	280.08	- 26.57
2	35	+ .24	.05	11.63	- 23.04	540.09	- 5.52
3	34	- .76	.57	22.42	- 12.25	150.06	+ 9.31
4	34	- .76	.57	22.93	- 11.74	137.83	+ 8.92
5	38	+ 3.24	10.49	22.70	- 11.97	143.28	- 38.76
6	33	- 1.76	3.09	21.21	- 13.46	187.17	+ 23.68
7	40	+ 5.24	27.46	51.80	+ 17.43	303.80	+ 91.33
8	37	+ 2.24	5.01	18.55	- 16.12	259.85	- 36.11
9	31	- 3.76	14.14	67.10	+ 32.43	1051.70	= 121.94
10	35	+ .24	.05	53.49	+ 18.82	354.19	+ 4.51
11	33	- 1.76	3.09	21.51	- 13.16	173.18	+ 23.16
12	37	+ 2.24	5.01	17.46	- 17.21	296.18	- 39.55
13	33	- 1.76	3.09	50.10	+ 15.43	238.08	- 27.15
14	35	+ .24	.05	35.00	+ .33	.10	+ 0.07
15	31	- 3.76	14.14	16.60	- 18.07	326.52	+ 67.94
16	40	+ 5.24	27.45	13.967	= 20.21	428.90	- 105.90
17	32	- 2.76	7.62	92.84	+ 18.17	3383.74	- 160.55
No	591		124.97	589.4		7092.10	- 561.05
17	34.76		11.17	34.67		84.21	- 228.92
						xy - -	332.13

$$r = \frac{Exy}{\sqrt{Ex^2 \times Ey^2}}$$

$$\frac{332.13}{11.17 \times 84.21} \qquad \frac{332.13}{940.62}$$

$$r = -0.35$$

$$\bar{Ex} = \frac{Ex}{N} \qquad \frac{591}{17} =$$

$$= 34.76$$

$$\bar{Ey} = \frac{Ey}{N} = \frac{589.4}{17}$$

$$= 34.67$$