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Asst Prof cum Guest Prof

(R50-11)

Psychology

S.R.A.P. College, Barachukki, Nuhari

(A constituent unit of B.R.A. Bihar University, M.P.)

Subject - Psychology
Topic - Statistics - Unit B
Class - B.A. Part II
Date - 3rd "B"
Day - Monday
Date - 24/01/2022
Period - 2nd

Contact no -

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अनुपातिका यतिता र सा विगताना जगत् विगताना शि
अनुपातिका यतिता (Actual mean) र विगताना यतिता

परिमाण परिमाण

X	Y	x	y	x ²	y ²	xy
120	65	17.20	13.90	295.84	193.21	239.08
115	60	12.20	8.90	148.84	79.20	108.58
110	55	7.20	3.90	51.84	15.21	28.08
108	53	5.20	1.90	27.84	3.60	9.88
105	52	2.20	.90	4.84	.81	1.98
100	50	2.80	1.10	7.84	1.21	3.08
95	47	7.80	6.10	60.84	16.81	31.98
93	45	9.80	6.10	96.84	37.21	59.78
92	44	10.80	7.10	116.84	50.41	76.68
90	40	12.80	11.10	163.84	123.21	142.08
1028	511			973.60	520.90	701.20

$$M_x = \frac{1028}{10} = 102.8$$

$$M_y = \frac{511}{10} = 51.10$$

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

$$= \frac{701.20}{\sqrt{973.60 \times 520.90}}$$

$$= \frac{701.20}{712.14}$$

$$= 98$$

$$\therefore r = 98$$

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द्वारा परिभाषित प्राप्ति है & शतकान्तर द्वारा विचलन से व्यक्त किया जाता है।
 मान्यता (assumed mean) है शिफ्ट मान है।

परीक्षण I	परीक्षण II						
X	Y	f	xy	x ²	y ²	xy	
120	65	20	15	400	225	900	
115	60	15	10	225	100	150	
110	55	10	5	100	25	50	
108	53	8	3	64	9	24	
105	52	5	2	25	4	10	
100	50	0	0	0	0	0	
95	47	-5	-3	25	9	15	
93	45	-7	-5	49	25	35	
92	44	-8	-6	64	36	48	
90	40	-10	-10	100	100	100	
$\Sigma x = 1028$	$\Sigma y = 511$			$\Sigma x^2 = 1052$	$\Sigma y^2 = 533$	$\Sigma xy = 732$	

$M_x = 102.80$ $M_y = 51.10$
 $N_x = 51.10$ $N_y = 50$
 $f M_x = 100$ $c_y = 1.10$
 $c_x = 2.80$ $c_y^2 = 1.21$
 $c_x^2 = 7.84$

$$\sigma_x = \sqrt{\frac{\Sigma x^2}{N} - c_x^2}$$

$$= \sqrt{\frac{1052}{50} - 7.84}$$

$$= \sqrt{105.20 - 7.84}$$

$$= \sqrt{97.36}$$

$$= 9.87$$

$$\sigma_y = \sqrt{\frac{\Sigma y^2}{N} - c_y^2}$$

$$= \sqrt{\frac{533}{50} - 1.21}$$

$$= \sqrt{53.30 - 1.21}$$

$$= \sqrt{52.09}$$

$$= 7.22$$

$$r = \frac{\Sigma xy}{N} - c_x c_y$$

$$= \frac{70.12}{50} - 2.80 \times 1.10$$

$$= 1.4024 - 3.08$$

$$= -1.6776$$

$r = -0.98$