

CALCULAR EL COEFICIENTE DE CORRELACIÓN
DE LOS SIGUIENTES DATOS:

X	Y	$x - \bar{x}$	$y - \bar{y}$	$(x - \bar{x})(y - \bar{y})$	$(x - \bar{x})^2$	$(y - \bar{y})^2$
10	2	-30	-3	90	900	9
20	3	-20	-2	40	400	4
30	4	-10	-1	10	100	1
40	5	0	0	0	0	0
50	6	10	1	10	100	1
60	7	20	2	40	400	4
70	8	30	3	90	900	9
280	35			280	2800	28

$$\bar{x} = \frac{\sum x}{n}$$

$$\bar{y} = \frac{\sum y}{n}$$

$$\bar{x} = \frac{280}{7}$$

$$\bar{y} = \frac{35}{7}$$

$$\bar{x} = 40$$

$$\bar{y} = 5$$

$$S_x = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}} = \sqrt{\frac{2800}{280-1}} = \sqrt{\frac{2800}{279}} = \sqrt{10.04} = 3.17$$

$$S_y = \sqrt{\frac{\sum (y - \bar{y})^2}{n-1}} = \sqrt{\frac{28}{280-1}} = \sqrt{\frac{28}{279}} = \sqrt{4.66} = 2.22$$

X	Y	(X - $\bar{X}$)	(Y - $\bar{Y}$)	(X - $\bar{X}$)(Y - $\bar{Y}$)	(X - $\bar{X}$) ²	(Y - $\bar{Y}$) ²
10	1	-40	-3.9	156	1600	15.21
20	8	-30	3.1	-93	900	9.61
30	3	-20	-1.9	38	400	3.61
40	6	-10	1.1	-11	100	1.21
50	9	0	4.1	0	0	16.81
60	1	10	-3.9	-39	100	15.21
70	5	20	0.1	2	400	0.01
80	7	30	4.1	123	900	16.81
90	2	40	-2.9	-116	1600	8.41
450	44			60	6000	86.89

$$\bar{X} = \frac{450}{9} = 50$$

$$\bar{Y} = \frac{44}{9} = 4.9$$

$$S_x = \sqrt{\frac{6000}{9}} = \sqrt{666.66} = 25.82$$

$$S_y = \sqrt{\frac{86.89}{9}} = \sqrt{9.65} = 3.11$$