

Tipo B

x

$$\bar{x} = 10$$

$$s_x = 2$$

y

$$\bar{y} = 4 = \bar{y}'$$

$$s_y^2 = 4 \quad s_y = 2$$

$$r_{xy}^2 = 0.49 \quad (0.7)$$

$$1. r_{xy} = \sqrt{0.49} = 0.7$$

$$2. C.A. = \sqrt{1 - r_{xy}^2} = \sqrt{1 - 0.49} = 0.71$$

1 - CA 0.51

$$3. C.V.P. = 1 - 0.71 = 0.29$$

$$4. s_{y \cdot x} = s_y \sqrt{1 - r_{xy}^2} = 2 \cdot 0.71 = 1.42$$
$$s_{y \cdot x}^2 = 2.02$$

$$5. s_y^2 = s_{y'}^2 + s_{y \cdot x}^2$$

$$4 = s_{y'}^2 + 2.02 \Rightarrow s_{y'}^2 = 4 - 2.02 = 1.98$$

$$6. y' = a + bx \Rightarrow y' = -3 + 0.7x \quad // \quad y' = -3 + 0.7 \cdot 4 = -0.2$$

$$a = \bar{y} - b\bar{x} = 4 - 0.7 \cdot 10 \Rightarrow 4 - 7 = -3$$

$$b = r_{xy} \frac{s_y}{s_x} = 0.7 \cdot \frac{2}{2} = 0.7$$

$$7. y' = bx \quad y' = 0.7 \cdot x \Rightarrow 0.7 \cdot (-6) = -4.2$$

$$x = 4 - 10 = -6$$

Otro modo: $y' - \bar{y}' = -0.2 - 4 = -4.2$

$$8. \Sigma y' = r_{xy} \Sigma x \Rightarrow \Sigma y' = 0.7 \cdot (-3) = -2.1$$

$$\Sigma x = \frac{x - \bar{x}}{s_x} = \frac{4 - 10}{2} = \frac{-6}{2} = -3$$

$$9. E_{max} = 2c \cdot s_{y \cdot x} = 2 \cdot 0.58 \cdot 1.42 = 3.66$$

$$10. \text{lim} = y' \pm E_{max} = -0.2 \pm 3.66 \begin{cases} -3.86 \\ 3.46 \end{cases}$$