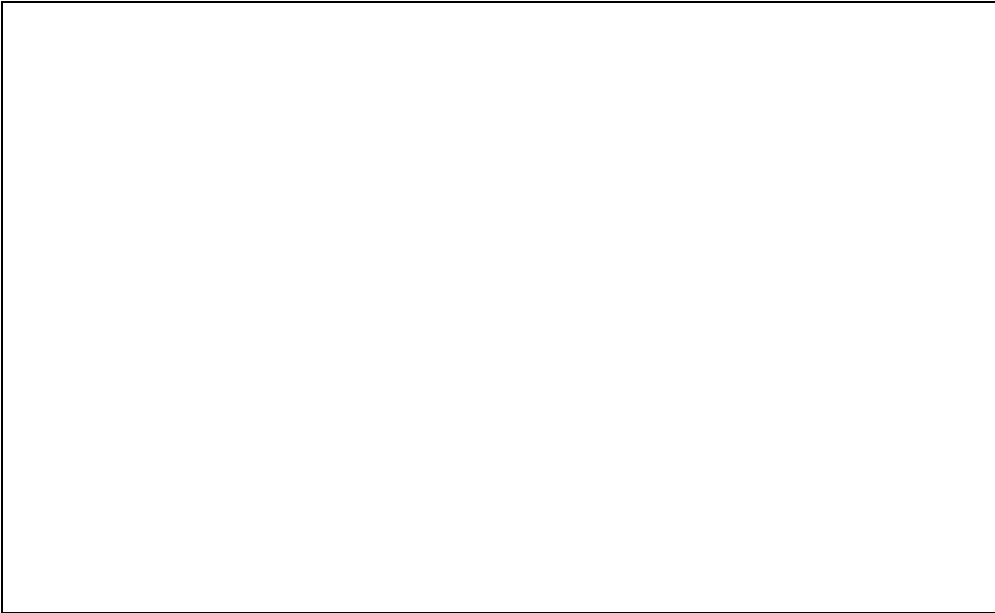


專門科目



$$f(x) = \frac{x-2}{2x+5}$$

$$f(x) = \log_3 x \quad x > 0$$

$$f(x) = e^x \cos x \quad e$$

$$C = \frac{1}{3}Q^3 - 7Q^2 + 111Q + \frac{1}{3}$$

$$Q = 100 - P$$

$$R \quad Q$$

$$\pi \quad Q$$

$$Q^*$$

$$(x, y) = (x_i, y_i) \quad (i = 1, 2, \dots, 10)$$

$$y \quad x \quad y = ax + b \quad a \quad b \quad a = r_{xy} \frac{\sigma_y}{\sigma_x}$$

$$b = \bar{y} - a\bar{x} \quad \sigma_{xy} = \frac{\sum_{i=1}^{10} x_i y_i}{10} - \bar{x}\bar{y}$$

$$\sigma_x^2 = \frac{\sum_{i=1}^{10} x_i^2}{10} - \bar{x}^2 \quad \sigma_y^2 = \frac{\sum_{i=1}^{10} y_i^2}{10} - \bar{y}^2 \quad \bar{x} = \frac{\sum_{i=1}^{10} x_i}{10} \quad \bar{y} = \frac{\sum_{i=1}^{10} y_i}{10}$$

$$r_{xy} = \frac{\sigma_{xy}}{\sigma_x \sigma_y} \left(-1 \leq r_{xy} \leq 1, \sigma_x = \sqrt{\frac{\sum_{i=1}^{10} x_i^2}{10} - \bar{x}^2}, \sigma_y = \sqrt{\frac{\sum_{i=1}^{10} y_i^2}{10} - \bar{y}^2} \right) \quad r_{xy}$$

$$\sum_{i=1}^{10} \quad \Sigma$$