

$$\bar{x} = 3, \text{ s.d.} = \frac{2}{\sqrt{3}}$$

$$\therefore \bar{x} = \frac{a+b+2}{3}$$

$$\therefore 3 = \frac{a+b+2}{3}$$

$$\therefore 9 - 2 = a + b$$

$$\therefore a + b = 7$$

$$\therefore \sum x^2 = n \cdot (\text{s.d.}^2 + \bar{x}^2)$$

$$= 3 \left(\frac{4}{3} + 9 \right)$$

$$= 3 \left(\frac{27+4}{3} \right)$$

$$\therefore \sum x^2 = 31$$

$$\therefore a^2 + b^2 + 4 = 31$$

$$\therefore a^2 + b^2 = 27$$

$$\therefore (a+b)^2 = a^2 + b^2 + 2ab$$

$$\therefore (7)^2 = 27 + 2ab$$

$$\therefore \underline{49 - 27} = ab$$

$$\therefore ab = 11 \quad \text{C}$$