

The sides of a rectangular park are in the ratio 4:3. If the area is 1728 m². Find the cost of fencing it at Rs. 2.50/ m² .

To solve this problem we need to know the perimeter value.

Let one side of park is x , then the other one is $\frac{3}{4}x$.

$$S = a \cdot b = x \cdot \frac{3}{4}x, \quad \frac{3}{4}x^2 = 1728, \quad x^2 = \frac{1728 \cdot 4}{3} = 2304,$$

$$x = \sqrt{2304} = 48, \quad \frac{3}{4}x = 36.$$

$$P = 2a + 2b = 2 \cdot 48 + 2 \cdot 36 = 168$$

$$\text{cost of fencing} = 168 \cdot 2.5 = 420.$$