

## Answer on Question #43987 – Math – Geometry

### Question

Find the cost of the paper for the walls of the room if each piece of paper is 40 cm wide and 60 cm long: the room is 6 m long, 4 m wide, 3 m high and the cost of paper is Rs 1.40 per piece; allow 11 m square for doors, etc., and assume that a whole number of pieces has to be bought.

### Solution

The area of the walls of the room:

$$S_w = (6 \text{ m} \cdot 3 \text{ m}) \cdot 2 + (4 \text{ m} \cdot 3 \text{ m}) \cdot 2 - 11 \text{ m}^2 = 49 \text{ m}^2$$

The area of the piece of paper:

$$S_p = 0.40 \text{ m} \cdot 0.60 \text{ m} = 0.24 \text{ m}^2$$

Number of the pieces has to be bought (rounded to the greater whole number):

$$n_p = S_w / S_p = 49 / 0.24 = 204.17 \approx 205 \text{ pieces.}$$

The total cost of the paper for the walls of the room:

$$C = P_p \cdot n_p = 1.40 \text{ Rs/piece} \cdot 205 \text{ pieces} = 287.00 \text{ Rs}$$

**Answer: 287.00 Rs**