

Name: Class:

Use area and perimeter to determine cost

a. Each side of Mr. Wilson's rectangular office is 9 feet long and 7 feet wide. It will cost \$2.00 per square feet to replace the carpet in the office. What would be the total cost to replace the carpet?

b. Peter's bed room is 5 meters wide and 10 meters long. He wants to put blinds on the walls in his room. The cost of a meter of blind material cost \$5.00. How will it cost to buy enough blind materials to go round the entire bed room?

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- a. Each side of Mr. Wilson's rectangular office is 9 feet long and 7 feet wide. It will cost \$2.00 per square feet to replace the carpet in the office. What would be the total cost to replace the carpet?

Let's first of all write down the information given;

Length of the office = 9 feet

Width of the office = 7 feet

Since the cost is given in square feet, it implies that we are going to calculate the area of the office first.

So, Area of the office = length X width

$$= 9 \text{ feet} \times 7 \text{ feet} = 63 \text{ square feet}$$

Finally, let's find the cost to replace the carpet in the office.

If 1 square feet cost \$2.00,

Then, 63 square feet will cost $\frac{63 \text{ ft}^2 \times \$2.00}{1 \text{ ft}} = \$126$

Therefore, it will cost \$126 to replace the carpet in the office

- b. Peter's bed room is 5 meters wide and 10 meters long. He wants to put blinds on the walls in his room. The cost of a meter of blind material cost \$5.00. How will it cost to buy enough blind materials to go round the entire bed room?

Let's first of all write down the information given;

Length of the bedroom = 10 meters

Width of the bedroom = 5 meters

Since the cost is given per meter, it implies that, we are going to calculate the perimeter of the bedroom first

So, perimeter of the bedroom = sum of all sides

$$= 10\text{m} + 5\text{m} + 10\text{m} + 5\text{m} = 20 \text{ meters}$$

Finally, let's find the cost of blind material which will cover the entire bedroom.

If 1 meter cost \$5.00

Then, 20 meters will cost $\frac{20\text{m} \times \$5.00}{1\text{m}} = \$100$

Therefore, the cost of blind materials that will cost the entire bedroom = \$100