



CREST Mathematics Olympiad (CMO) Worksheet *for* Class 6



Topic
Mensuration



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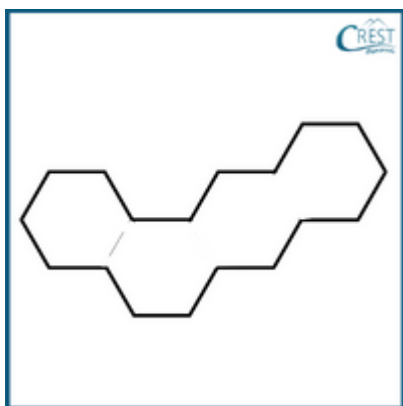
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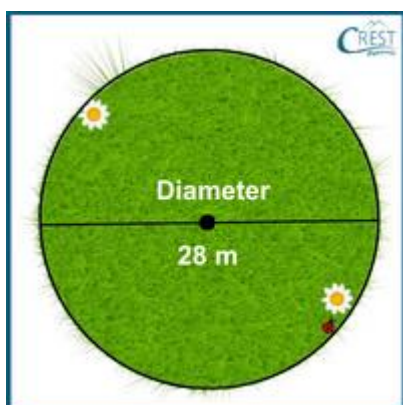
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Worksheet on Mensuration

1. Each rectangular tile is 50 centimetres long and 35 centimetres wide. How many tiles will be required to cover the floor of a room with a length of 9.45 metres and a breadth of 2.5 metres?
 - a. 115
 - b. 135
 - c. 155
 - d. 175
2. Four regular hexagons of perimeter 300 cm each are joined. What is the perimeter of the new figure formed as shown in the given figure?

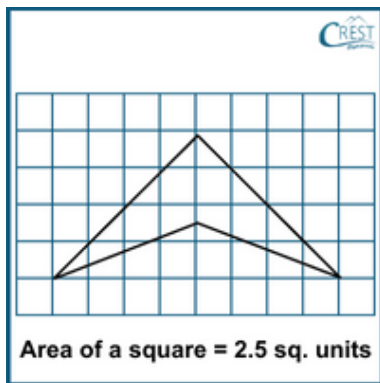


- a. 300 cm
 - b. 600 cm
 - c. 900 cm
 - d. 1200 cm
3. The diameter of a circular field is 28 metres. How much distance will a man walk in order to make eight complete rounds of this field?



- a. 604 m
- b. 624 m
- c. 704 m
- d. 724 m

4. What is the length of each side of the field if the cost of fencing a square plot at the rate of \$2.50 per metre is \$2700?
- 270 m
 - 540 m
 - 720 m
 - 1080 m
5. What is the total estimated area of the given figure?



- 16.5 sq. units
- 17.5 sq. units
- 18.5 sq. units
- 19.5 sq. units

Answer Key

1. b - 135

Explanation: Length of the rectangular tile = 50 cm = $50/100$ m = 0.5 m
 Breadth of the rectangular tile = 35 cm = $35/100$ m = 0.35 m
 Area of the rectangular tile = Length $\times$ Breadth = 0.5 m $\times$ 0.35 m
 Length of the floor of a room = 9.45 m
 Breadth of the floor of a room = 2.5 m
 Area of the floor of a room = Length $\times$ Breadth = 9.45 m $\times$ 2.5 m
 Number of tiles = Area of the floor of a room / Area of the rectangular tile
 = $(9.45 \text{ m} \times 2.5 \text{ m}) / (0.5 \text{ m} \times 0.35 \text{ m})$
 = $(945 \text{ m} \times 25 \text{ m} \times 10 \times 100) / (100 \times 5 \text{ m} \times 35 \text{ m} \times 10)$
 = 135

2. c - 900 cm

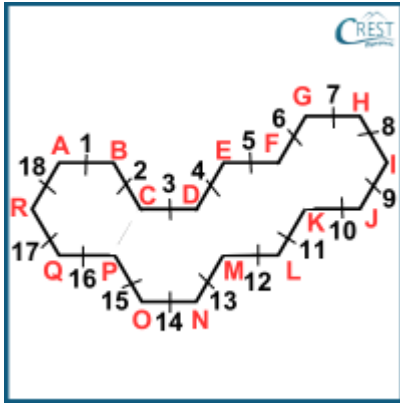
Explanation: Perimeter of a regular hexagon = 300 cm

$\Rightarrow 6 \times \text{Side of a regular hexagon} = 300 \text{ cm}$

$\Rightarrow \text{Side} = 300/6 \text{ cm}$

$\Rightarrow \text{Side} = 50 \text{ cm}$

The number of sides is marked in the figure.



There are 18 equal sides in the figure.

Perimeter of the given figure = Sum of the lengths of sides of the figure

$= AB + BC + CD + DE + EF + FG + GH + HI + IJ + JK + KL + LM + MN + NO + OP + PQ + QR + RA$

$= 18 \times 50 \text{ cm}$

$= 900 \text{ cm}$

3. c - 704 m

Explanation: Diameter (d) of a circle field = 28 m

One Complete round = Circumference of a circular field = πd

$= 22/7 \times 28$

$= 88 \text{ m}$

Total distance walked by man to complete 8 rounds = $8 \times \text{One Complete round}$

$= 8 \times 88 \text{ m}$

$= 704 \text{ m}$

4. a - 270 m

Explanation: Total cost of fencing a square plot = \$2700

Rate of fencing per metre = \$2.50

Perimeter of square = Total cost of fencing a square plot / Rate of fencing

$= 2700 / 2.5$

$= 1080 \text{ m}$

Using the formula, **perimeter of a square** = $4 \times \text{Length of a side of a square plot}$

$\Rightarrow 4 \times \text{Length of a side of a square plot} = 1080 \text{ m}$

$\Rightarrow \text{Length of a side of a square plot} = 1080 \text{ m} / 4$

$\Rightarrow \text{Length of a side of a square plot} = 270 \text{ m}$

5. b - 17.5 sq. units

Explanation: Area of a square = 2.5 sq. units

Number of completely covered squares = 2

Area of squares that are completely covered = 2×2.5 sq. units
= 5 sq. units

Number of squares which are more than half covered squares = 2

Area of squares that are more than half covered = 2×2.5 sq. units
= 5 sq. units

Number of squares which are exactly half covered square = $\frac{1}{2} \times 6 = 3$

Area of squares that are exactly half covered square = 3×2.5 sq. units
= 7.5 sq. units

Number of squares which are less than half covered squares = 6

[Disregard any area that is less than half a square in size.]

Area of squares that are less than half covered squares = 0 sq. units

Total estimated area = 5 sq. units + 5 sq. units + 7.5 sq. units + 0 sq. units
= 17.5 sq. units

More Questions Coming Soon – Keep Learning!



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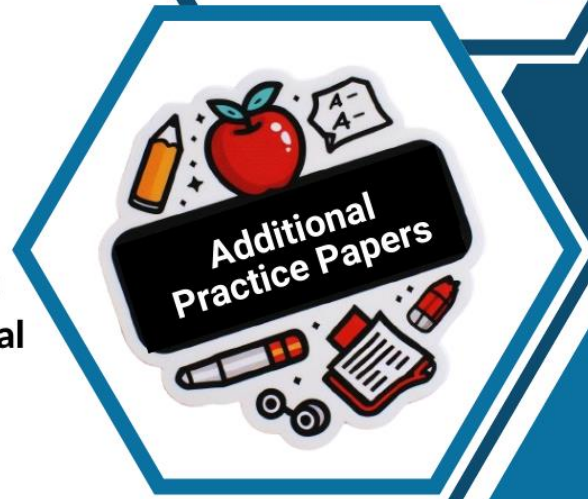
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