



MATHS

BOOKS - HT Olympiad Previous Year Paper

MENSURATION

Mathematical Reasoning

1. If the area of a rectangle is equal to the area of a square and length of the rectangle is

equal to the perimeter of the square, then the breadth of rectangle is ____

A. Side + 2

B. $(\text{Side})^2 + 2$

C. Side $\div 4$

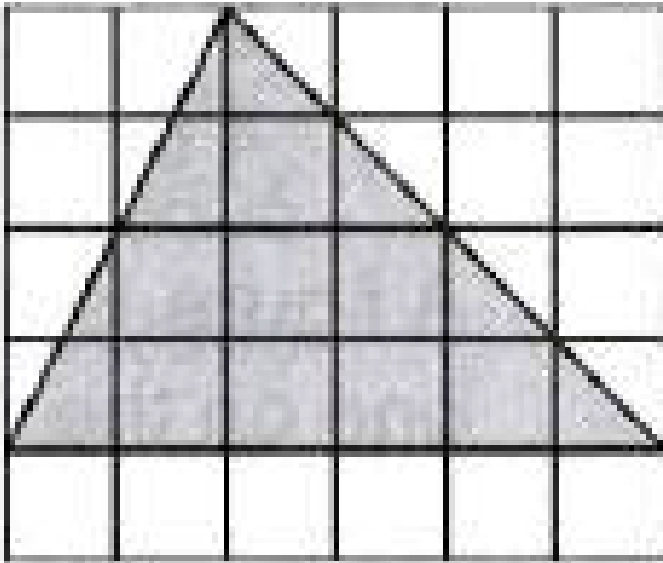
D. Side $\div 3$

Answer: C



Watch Video Solution

2. Find the area of the shaded figure, taking the area of each square as 1 cm^2 ?



A. 48cm^2

B. 16cm^2

C. 12cm^2

D. 18cm^2

Answer: C



Watch Video Solution

3. If the area of the rectangle is 16m^2 , then which of the following may not be the possible dimensions for rectangle ?

A. Length = 8 m, breadth = 2 m

B. Length = 16 m, breadth = 1 m

C. Length = 32 m, breadth = $\frac{1}{2}m$

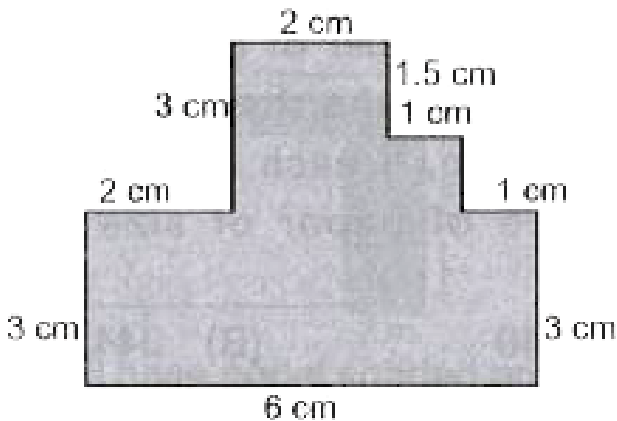
D. Length = 8.5 m, breadth = 2 m

Answer: D



Watch Video Solution

4. Find the area of given figure.



A. 25.5cm^2

B. 23.5cm^2

C. 25cm^2

D. 24cm^2

Answer: A



Watch Video Solution

5. A rectangular sheet measures 43.15 m by 30.72 m. Which of the following is the best estimate for its perimeter?

A. 146 m

B. 148m

C. 172m

D. None of these

Answer: B



Watch Video Solution

6. A square and a rectangle have equal areas. If each side of the square is 18 cm and the width

of the rectangle is 12 cm, then find the perimeter of the rectangle.

A. 48cm

B. 56cm

C. 92cm

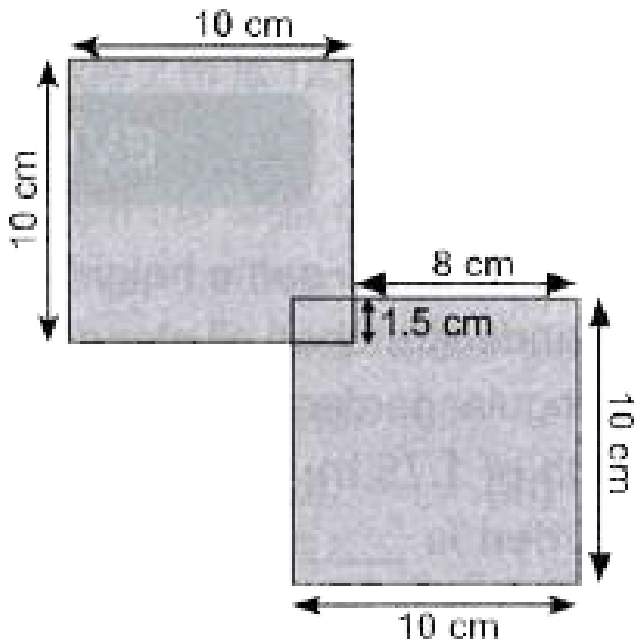
D. 78cm

Answer: D



Watch Video Solution

7. Find the perimeter of the given figure.



A. 80cm

B. 70cm

C. 72cm

D. 73cm

Answer: D



Watch Video Solution

8. A thin wire 48 cm long, is bent to form a rectangle. The breadth of the rectangle is one-third its length. What is the area of the rectangle?

A. $118cm^2$

B. $102cm^2$

C. $98cm^2$

D. 108cm^2

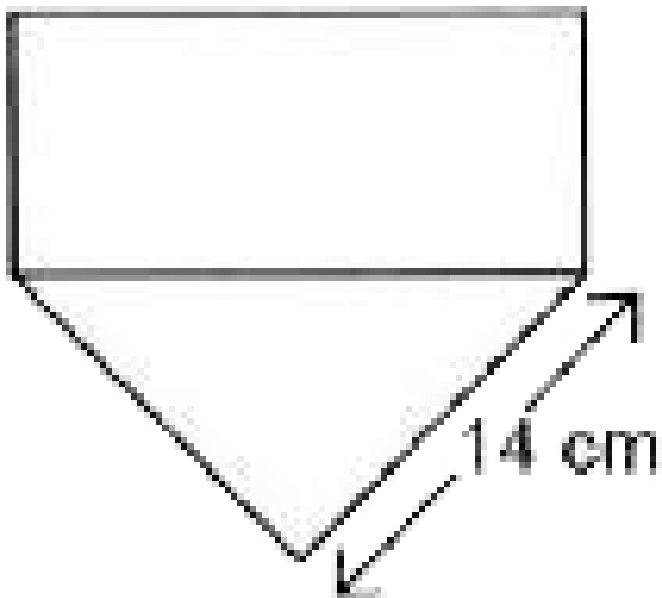
Answer: D



Watch Video Solution

9. The given figure is made up of a rectangle and an equilateral triangle. The width of the rectangle is half the length of the rectangle.

Find the perimeter of the figure.



A. 48cm

B. 56cm

C. 72cm

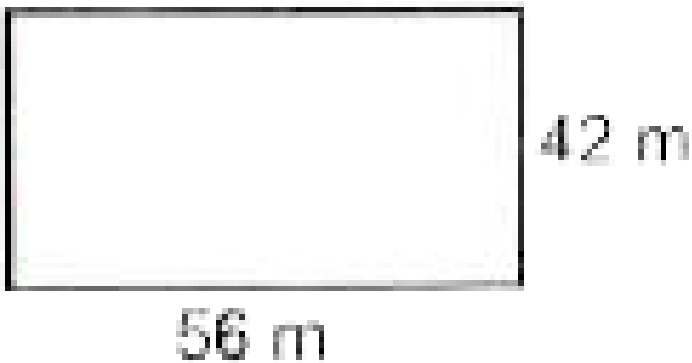
D. 52cm

Answer: B



Watch Video Solution

10. The length of the given rectangular field is decreased by 7 m. Find its new width, if its area remains unchanged.



A. 48m

B. 42m

C. 64m

D. 34m

Answer: A



Watch Video Solution

11. If side of a square is doubled, then the new perimeter is ___ times the original perimeter.

A. 2

B. $\frac{1}{4}$

C. 9

D. 4

Answer: A



Watch Video Solution

12. The area of a rectangular park is 3100 m^2 and its breadth is 50 m. The value of 4 times its perimeter is_____

A. 648m

B. 596m

C. 198m

D. 896m

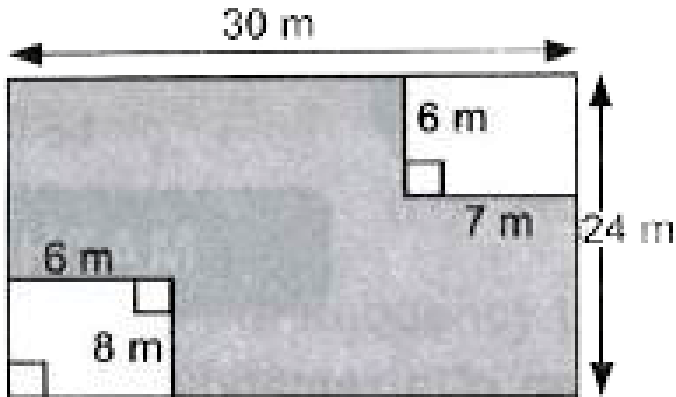
Answer: D



Watch Video Solution

13. The shaded area of the floor is to be tiled. If tiling costs Rs 15 per m^2 , then what will be the

total cost ?



A. Rs 9030

B. Rs 6540

C. Rs 8464

D. Rs 9450

Answer: D



Watch Video Solution

14. If the area of a square is numerically equal to the perimeter of the square, then the side of square is ___

A. 2 units

B. 3 units

C. 4 units

D. 5 units

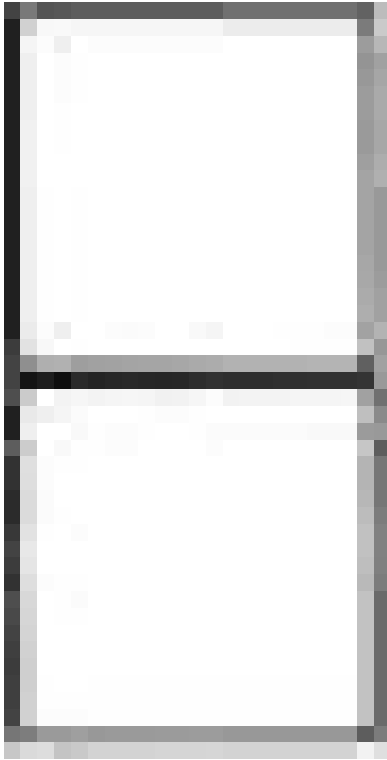
Answer: C



Watch Video Solution

15. A figure is formed by putting two squares one on the other as shown in the figure. If the length of each side of the two squares is 8 cm,

then the perimeter of the figure formed is _____



A. 56cm

B. 64cm

C. 32cm

D. 48cm

Answer: D



Watch Video Solution

Everyday Mathematics

1. 80 students of the same height, stand with both hands stretched all along the sides of a rectangular garden, each student covering a

length of 1.75 m. Then the perimeter of the garden is ____

A. 1400m

B. 140m

C. 14m

D. 1400km

Answer: B



Watch Video Solution

2. The length of the wooden strip required to frame a photograph having length and breadth as 39.5 cm and 31 cm respectively, is _____

A. 79cm

B. 1224.5cm

C. 141cm

D. 70.5cm

Answer: C



Watch Video Solution

3. The rectangular piece of land measures 2 m by 3 m. Each side is to be fenced with three rows of wire. What is the length of wire needed?

A. 45m

B. 44m

C. 30m

D. 21m

Answer: C



Watch Video Solution

4. Find the number of envelopes that can be made out of a sheet of paper 384 cm by 168 cm, if each envelope requires a piece of paper of size 16 cm by 12 cm.

A. 340

B. 344

C. 336

D. 342

Answer: C



Watch Video Solution

5. The number of paving stones each measuring 10 dm by 9 dm required to pave a rectangular veranda 60 m by 6 m is ____

A. 360

B. 400

C. 350

D. 300

Answer: B



Watch Video Solution

6. Niharika walks thrice around a square field of side 22 m. Girish walks twice around a rectangular field of length 12 m and breadth 10 m. Who covers more distance and by how much?

A. Girish, 20 m

B. Niharika, 200 m

C. Girish, 176 m

D. Niharika, 176 m

Answer: D



Watch Video Solution

7. Latika wants to put a border around her bedsheet of length 10 m and breadth 5 m 60

cm. Find the total cost of the border required at the rate of Rs 90 per metre.

A. Rs 2808

B. Rs 2505

C. Rs 2408

D. Rs 2605

Answer: A



Watch Video Solution

8. Five square flower beds each of side 1.2 m are dug on a piece of land 4.8 m long and 4.2 m wide. What is the area of the remaining part of land?

A. $13.69m^2$

B. $12.96m^2$

C. $11.96m^2$

D. $144m^2$

Answer: B



Watch Video Solution

9. Find the distance travelled by Priya, if she takes 4 rounds of equi-triangular park of side 105 cm.

A. 1260cm

B. 1160cm

C. 960cm

D. 420cm

Answer: A





10. The total cost of flooring a room is Rs 2160. The rate of flooring is Rs 45 per square metre. If the room is 8 metres long, then find its breadth.

A. 11m

B. 7m

C. 12m

D. 6m

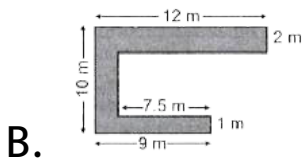
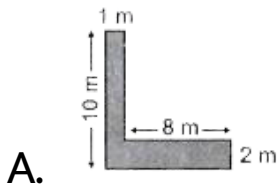
Answer: D



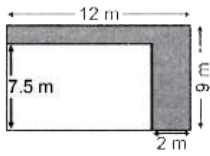
Watch Video Solution

Achievers Section Hots

1. Which of the following has the maximum shaded area ?



C.



D. All have equal shaded areas

Answer: B



Watch Video Solution

2. State 'T' for true and 'F' for false.

(i) The perimeter of a regular hexagon of side

2 m is 12 m.

(ii) If the side of a square floor is 9 m, then the

area of the carpet needed to cover the floor of the room is $36m^2$.

(iii) A square and rectangle can have same perimeter.

A. i ii iii
 T F T

B. i ii iii
 F T F

C. i ii iii
 F T T

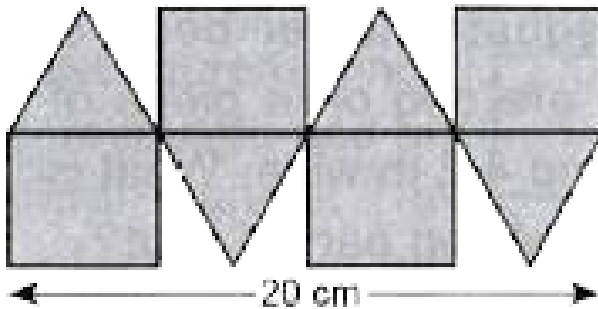
D. i ii iii
 F F T

Answer: A



Watch Video Solution

3. Priya bent a plastic wire to form the given figure. The figure is made up of 4 squares and 4 equilateral triangles. Find the length of wire.



- A. 110cm
- B. 90cm
- C. 100cm
- D. 80cm

Answer: C



Watch Video Solution

4. Find the values of P, Q, R and S

Length of rectangle (in cm)	Breadth of rectangle (in cm)	Area (in cm^2)	Perimeter (in cm)
25	P	300	Q
18	R	S	66

A. P Q R S
12 74 15 207

B. P Q R S
12 15 74 270

C. P Q R S
12 74 15 270

D.	P	Q	R	S
	42	15	270	74

Answer: C



Watch Video Solution

5. Figure P is made up of six identical squares. Two squares were removed from figure P to form figure Q. The perimeter of figure P is 240

cm. What is the perimeter of figure Q ?

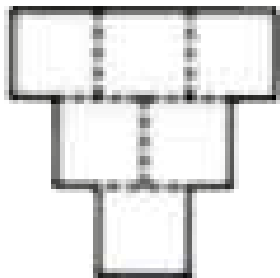


Figure P

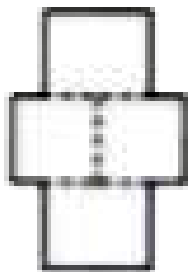


Figure Q

A. 220cm

B. 180cm

C. 200cm

D. 160cm

Answer: C



Watch Video Solution

