



Mensuration DPP-01

Multiple choice questions

1. Curve which begins and end at the same point is called a
(1) Closed curve (2) Open curve (3) Normal curve (4) Definite curve
2. What is a square?
(1) Closed curve with all sides equal (2) Open curve with all sides equal
(3) Closed curve with all sides unequal (4) Open curve with all sides unequal
3. How many metres will make 2.5 km.
(1) 25 (2) 250 (3) 2500 (4) 25000
4. (I) For sketching a square we need only one thing i.e., side length
(II) For sketching a rectangle, we need only one thing i.e., side length
(1) True, True (2) True, False (3) False, True (4) False, False
5. Which of the following is correct?
(1) A polygon is a figure which comprises of straight lines
(2) A polygon is a figure which comprises of all types of curves
(3) A polygon is a closed figure made up of straight lines
(4) A polygon is a figure which comprises of straight lines and curves

Subjective questions

6. What are closed curves? Explain with diagram.
7. What are regular polygons? Give two examples with diagram.
8. Convert the following as instructed:
(i) 120 m 45 cm to cm
(ii) 729 m 32 cm to m
9. Fill in the blanks:
(i) A square has all sides _____ in length.
(ii) In a rectangle _____ sides are equal.
(iii) Number of sides in a triangle is _____.
10. Convert 506 cm into m.

SOLUTIONS DPP-01

1. Option (1)

Curve which begins and end at the same point is called a Closed curve.

2. Option (1)

Square is a closed curve with all sides equal.

3. Option (3)

$$1 \text{ Km} = 1000 \text{ m}$$

$$2.5 \text{ km} = 2.5 \times 1000$$

$$= 2500 \text{ m}$$

4. Option (2)

True : For sketching a square we need only one thing i.e., side length

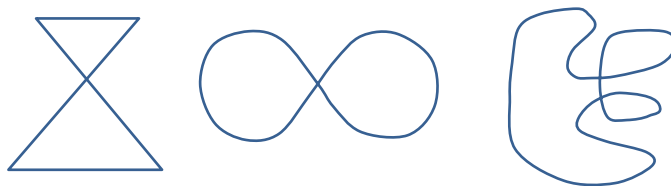
False : For sketching a rectangle we need two things i.e., length and breadth.

$$= 50 \text{ m}$$

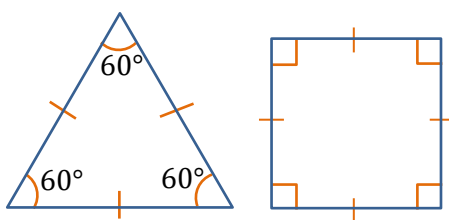
5. Option (3)

The definition of a polygon states that 'A simple closed curve made up of only line segments is called a polygon'. The other options which does not state a polygon is a closed figure and made of straight lines are wrong.

6. All the curves that has same starting and ending point are known as closed curves.



7. Regular polygons are those polygons (simple closed figures) which have all sides equal and all angles equal. For example, equilateral triangle, square etc.

8. (i) $120 \text{ m } 45 \text{ cm} = 120\text{m} + 45\text{cm}$

$$= 120 \times 100 \text{ cm} + 45\text{cm}$$

$$= 12000 \text{ cm} + 45 \text{ cm}$$

$$= 12045 \text{ cm}$$

(ii) $729\text{m } 32\text{cm} = 729 \text{ m} + 32 \text{ cm}$

$$= 729 \text{ m} + \frac{32}{100} \text{ cm}$$

$$= 729\text{m} + 0.32\text{m}$$

$$= 729.32 \text{ m}$$

9. (i) A square has all sides equal in length.
(ii) In a rectangle, opposite sides are equal.
(iii) Number of sides in a triangle is three.

10. 506 cm to m

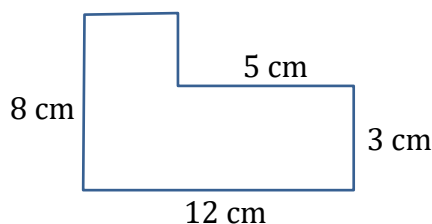
$$\begin{aligned} 506 \text{ cm} &= \frac{506}{100} \text{ m} \\ &= 5.06 \text{ m} \end{aligned}$$



Mensuration DPP-02

Multiple choice questions

- Perimeter of a triangle is the sum of lengths of _____ sides.
(1) 2 (2) 3 (3) 4 (4) 5
- Perimeter of a square field whose side is 4 m.
(1) 8 m (2) 16 m (3) 12 m (4) 10 m
- Perimeter of a rectangle whose length = 25 cm, breadth = 15 cm is
(1) 40 cm (2) 80 cm (3) 50 cm (4) 81 cm
- Perimeter of a square is 144 cm then side of square is
(1) 34 cm (2) 36 cm (3) 44 cm (4) 38 cm
- Find perimeter.



- (1) 36 cm (2) 38 cm (3) 40 cm (4) 42 cm
- A regular polygon having 'n' sides has perimeter as 'm' then length of each side of polygon is.
(1) mn units (2) $\frac{n}{m}$ units (3) $\frac{m}{n}$ units (4) Can't be determined

Subjective questions

- The perimeter of a rectangular piece of card board is 142 cm. Its breadth is 32 cm. Find its length.
- Compare the perimeter of a square whose side is 30 cm long to perimeter of a rectangle 15 cm long and 30 cm wide.
- The length and the breadth of a rectangle are in ratio 5:8. If perimeter of the rectangle is 156cm then find its length and breadth.
- Rahul took 4 rounds of a square park of side 245m. His friend Ram took same number of rounds of a rectangular park 200m long and 300mwide. Who covered more distance and by how much?

SOLUTIONS DPP-02

1. Option (2)

Perimeter of triangle is sum of 3 sides.

2. Option (2)

Perimeter of square = $4 \times \text{side}$

$$= 4 \times 4 \text{ m}$$

$$= 16 \text{ m}$$

3. Option (2)

Perimeter of rectangle = $2(L + B)$

$$= 2(25 + 15)$$

$$= 2 \times 40$$

$$= 80 \text{ cm}$$

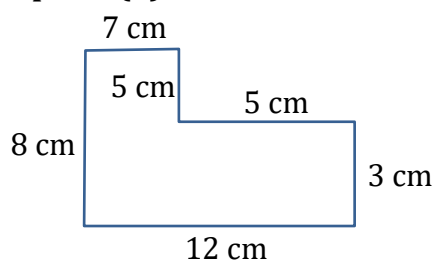
4. Option (2)

Perimeter of square = $4 \times \text{side}$

$$\Rightarrow 144 = 4 \times \text{side}$$

$$\Rightarrow \frac{144}{4} = \text{side} = 36 \text{ cm}$$

5. Option (3)



Find unknown sides by looking at figure

$$= 8 - 3 = 5$$

$$12 - 5 = 7$$

$$\text{So, perimeter} = 8 + 12 + 3 + 5 + 5 + 7 = 40 \text{ cm}$$

6. Option (3)

Perimeter of regular polygon with n sides = $n \times (\text{side length})$

Perimeter = $m = n \times \text{side length}$

$$\frac{m}{n} = \text{side length}$$

7. Perimeter of a rectangle = $2(\ell + b)$

$$142 = 2(\ell + 32)$$

$$\frac{142}{2} = \ell + 32$$

$$71 - 32 = \ell$$

$$39 = \ell$$

Therefore, length = 39 m.

8. For a rectangle, perimeter = $2(\ell + b)$

$$= 2(15+30)$$

$$= 2(45)$$

$$= 90 \text{ cm}$$

For a square, perimeter = $4 \times \text{side}$

$$= 4 \times 30$$

$$= 120 \text{ cm}$$

Hence, perimeter of the square is greater than perimeter of the rectangle.

9. Let the length and breadth of the rectangle is $(5x)$ cm and $(8x)$ cm

$$\text{So, perimeter} = 2(\ell + b)$$

$$156 = 2(5x + 8x)$$

$$156 = 2(13x)$$

$$156 = 26x$$

$$\frac{156}{26} = x$$

$$6 = x$$

$$\text{Length} = 5x = 5 \times 6 = 30 \text{ cm}$$

$$\text{Breadth} = 8x = 8 \times 6 = 48 \text{ cm}$$

10. For Rahul, distance covered in 1 round = perimeter of the square park

$$= 4(\text{side})$$

$$= 4(245) = 980 \text{ m}$$

$$\text{Therefore, distance covered in 4 rounds} = 4 \times 980 = 3920 \text{ cm}$$

For Ram, distance covered in 1 round = perimeter of rectangle

$$= 2(\ell + b)$$

$$= 2(200 + 300) = 2(500)$$

$$= 1000 \text{ m}$$

$$\text{Distance covered in 4 rounds} = 4 \times 1000 = 4000 \text{ m}$$

$$\text{Now, as } 4000 > 3920 \text{ and } 4000 - 3920 = 80 \text{ m}$$

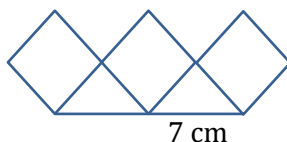
Therefore, Ram covered 80 m more distance as compared to Rahul.



Mensuration DPP-03

Multiple choice questions

1. Find the perimeter of the given figure, if it is made up of regular polygons only.



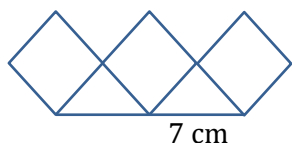
- (1) 84 cm (2) 98 cm (3) 70 cm (4) 17 cm
2. Which of the following has larger perimeter.
- (1) Regular octagon of side 3 cm (2) Regular hexagon of side 3 cm
- (3) Regular pentagon of side 3 cm (4) Regular heptagon of side 3 cm

Subjective questions

3. Find the perimeter of an equilateral triangle of side 9 cm?
4. Find the perimeter of an equilateral triangle of side 16 cm?
5. A pentagon has all sides equal to 6 cm. What will be its perimeter?

SOLUTIONS DPP-03

1. Option (3)



the length of all the sides in the figure = 7 cm

Therefore, the perimeter of the figure = sum of all the boundaries

$$= 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 70 \text{ cm}$$

2. Option (1)

(1) perimeter of regular octagon = $3 \times 8 = 24 \text{ cm}$

(2) perimeter of regular hexagon = $3 \times 6 \text{ cm} = 18 \text{ cm}$

(3) perimeter of regular pentagon = $3 \times 5 \text{ cm} = 15 \text{ cm}$

(4) perimeter of regular heptagon = $3 \times 7 \text{ cm} = 21 \text{ cm}$

So, regular octagon has largest perimeter.

3. An equilateral triangle is a triangle having all three sides equal in length.

Length of each side of an equilateral triangle = 9 cm

Perimeter of an equilateral triangle = $(3 \times \text{Length of each side}) \text{ units}$

$$= (3 \times 9) \text{ cm} = 27 \text{ cm}$$

4. An equilateral triangle is a triangle having all three sides equal in Length.

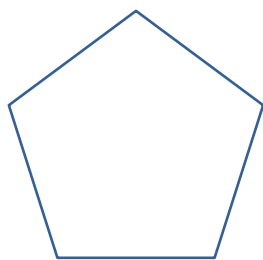
Length of each side of an equilateral triangle = 16 cm

Perimeter of an equilateral triangle = $(3 \times \text{Length of each side}) \text{ units}$

$$= (3 \times 16) \text{ cm}$$

$$= 48 \text{ cm}$$

5.



All the sides of the pentagon are equal. Therefore, it is a regular polygon.

The perimeter of a regular polygon = $(\text{length of one side}) \times \text{Number of sides}$

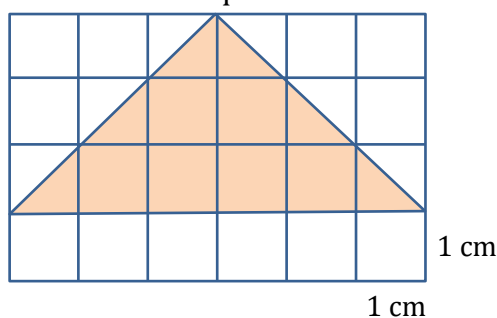
$$\text{Perimeter of a regular pentagon} = 6 \text{ cm} \times 5 = 30 \text{ cm}$$



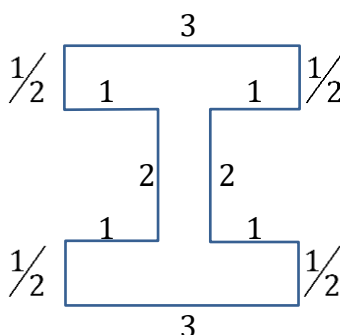
Mensuration DPP-04

Multiple choice questions

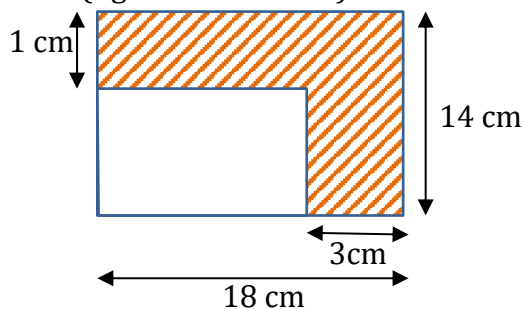
- Amount of region enclosed by a plane closed figure is called its _____.
(1) Area (2) perimeter (3) Circumference (4) Boundary
- Find area of shaded triangle if each small square has side as 1 cm.



- Find the area of a square of side 1 cm.
(1) 1 cm^2 (2) 4 cm^2 (3) 9 cm^2 (4) None
- The area of the figure is.

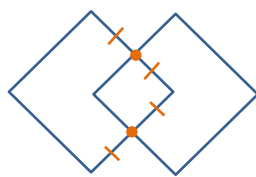


- What will happen to area of a rectangle if both length and breadth are doubled.
(1) 2 times (2) 4 times (3) 8 times (4) Not change
- A room is 4m 50 cm long and 3m 24 cm wide. How many glazed square tiles with side 9 cm will be enough to cover the floor.
(1) 1800 (2) 2000 (3) 1050 (4) 1450
- Find the area of shaded portion (figure not to scale).



- Find the area of shaded portion (figure not to scale).
(1) 250 cm^2 (2) 195 cm^2 (3) 227 cm^2 (4) 57 cm^2

8. Two squares of side 4 cm each are arranged as given in the figure. What is the area of overlap?



- (1) 1 cm^2 (2) 2 cm^2 (3) 3 cm^2 (4) 4 cm^2
9. In a triangle ABC, the base BC and its corresponding altitude are 4.2 cm and 16.8 cm respectively. If the altitude drawn on side AB is 10 cm, then what is the length of side AB?
- (1) 20 cm (2) 7.056 cm (3) 8.16 cm (4) 12.12 cm
10. The area of a square is 625 m^2 . Find its side
- (1) 25 m (2) 50 m (3) 125 m (4) 5 m
11. The area of a rectangular field is 250 m^2 . If the breadth of the field is 10 m, find its length.
- (1) 25 m (2) 50 m (3) 100 m (4) 125 m

Subjective questions

12. Two squares of side 6.2 cm are joined end to end. Find the perimeter and area of the figure formed.
13. Find the area of a square whose perimeter is 440m.
14. How many envelopes of size $25 \text{ cm} \times 15 \text{ cm}$ can be made from a rectangular sheet of size $4 \text{ m} \times 1.2 \text{ m}$?
15. The length and the breadth of a rectangular park are in the ratio 4:5. If the perimeter of the park is 108m then find its area.

SOLUTIONS DPP-03

1. Option (1)

Amount of region enclosed by a plane closed figure is called its area.

2. Option (4)

Counting complete square = 6

Counting half square = 6

Area of complete square = 1 cm^2 and Area of 6 complete square = 6 cm^2

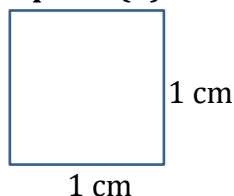
area of 1 half square is $\frac{1}{2} \text{ cm}^2$

\Rightarrow area of 6 half square = $6 \times \frac{1}{2} \text{ cm}^2 = 3 \text{ cm}^2$

Total area = $(6 + 3) \text{ cm}^2$

= 9 cm^2

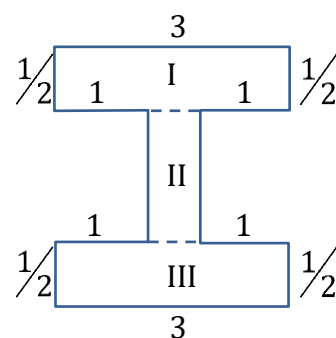
3. Option (1)



Area of square = $(\text{side})^2$

= $(1 \text{ cm})^2 = 1 \text{ cm}^2$

4. Option (1)



Area = Area I + Area II + Area III

= $3 \times \frac{1}{2} + 2 \times 1 + 3 \times \frac{1}{2}$

= 5 square units

5. Option (2)

Let rectangle has length = ℓ , Breadth = b

\Rightarrow area = $\ell \times b$

If length = 2ℓ , Breadth = $2b$

now area = $(2\ell) \times (2b) = 4\ell b$

= $4 \times$ area = 4 times of old area

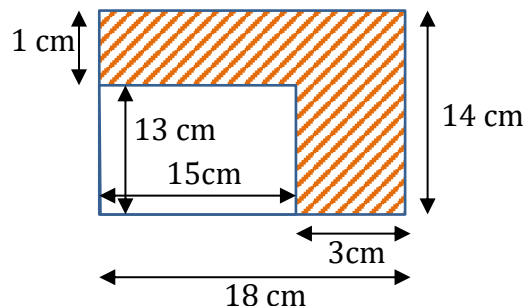
6. Option (1)

$$\text{Area of room} = 450 \times 324 = 145800 \text{ cm}^2$$

$$\text{Area of 1 tile} = 9 \times 9 = 81 \text{ cm}^2$$

$$\text{No. of tiles} = \frac{\text{Area of floor}}{\text{Area of tile}}$$

$$= \frac{145800}{81} = 1800$$

7. Option (4)

Shaded area = area of big rectangle – area of small rectangle

$$= 18 \times 14 - [15 \times 13]$$

$$= 252 - 195$$

$$= 57 \text{ cm}^2$$

8. Option (4)

Area of overlap = area of square.

$$\text{And, side of square} = \frac{4}{2} = 2 \text{ cm}$$

\therefore area of overlap = side \times side

$$= 2 \times 2 = 4 \text{ cm}^2$$

9. Option (2)

$$\text{Area of } \triangle ABC = \frac{1}{2} \times b \times h$$

$$= \frac{1}{2} \times 4.2 \times 16.8$$

$$= 2.1 \times 16.8 = 35.28 \text{ cm}^2$$

$$\text{Also, area } \triangle ABC = \frac{1}{2} \times b \times h$$

$$35.28 = \frac{1}{2} \times b \times 10$$

$$b = \frac{35.28}{5}$$

$$b = 7.056 \text{ cm}$$

10. Option (1)

$$\text{Side} = \sqrt{625} = 25 \text{ m}$$

11. Option (1)

$$\text{Length} = \frac{250}{10} = 25 \text{ m}$$

12. The figure so formed is a rectangle whose length = $6.2 + 6.2 = 12.4 \text{ cm}$

And, the breadth of the rectangle = 6.2 cm

Now, the perimeter of the rectangle so formed = $2(\ell + b)$

$$= 2(12.4 + 6.2)$$

$$= 2(18.6)$$

$$= 37.2 \text{ cm}$$

And, the area of the rectangle = $\ell \times b$

$$= 12.4 \times 6.2$$

$$= 76.88 \text{ cm}^2$$

13 The perimeter of a square = $4 \times \text{side}$

$$440 = 4 \times \text{side}$$

$$\frac{440}{4} = \text{side} = 110 \text{ m}$$

Therefore, the area of the square = $\text{side} \times \text{side}$

$$= 110 \times 110$$

$$= 12100 \text{ m}^2$$

14. Size of envelope = $25 \text{ cm} \times 15 \text{ cm}$

$$\text{Area of envelope} = 25 \times 15 \text{ cm}^2 = 375 \text{ cm}^2$$

Size of rectangular sheet = $4 \text{ m} \times 1.2 \text{ m}$

$$\text{Area of rectangular sheet} = 400 \text{ cm} \times 120 \text{ cm} = 48000 \text{ cm}^2$$

$$\text{Number of envelopes} = \frac{\text{Area of rectangle}}{\text{Area of envelope}}$$

$$= \frac{48000}{375} = 128 \text{ envelopes}$$

15 Let the common factor be x .

So, the length of the park = $4x \text{ m}$

The breadth of the park = $5x \text{ m}$

Now, the perimeter of the park = $2(\ell + b)$

$$108 = 2(4x + 5x)$$

$$\frac{108}{2} = 9x$$

$$\frac{54}{9} = x = 6$$

Therefore, the length = $4x = 4(6) = 24 \text{ m}$

Breadth = $5x = 5(6) = 30 \text{ m}$

So, the area of the park = $\ell \times b$

$$= 24 \times 30$$

$$= 720 \text{ m}^2$$