doubtnut
India's Number 1 Education App

MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

CONCEPT OF PERIMETER AND AREA

Example

1. Find the perimeter of a rectangle whose length and breadth are $15.4\,\text{cm}$ and $11.6\,\text{cm}$

respectively.

A. 45cm

B. 108cm

C. 54cm

D. 52cm

Answer: C

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2. Find the cost of fencing a rectangular field $260\ m$ long and $175\ m$ wide at $Rs\ 40$ per meter..

A. $\text{Rs. } 34,800$

B. $\text{Rs. } 48,000$

C. $\text{Rs. } 52,000$

D. None of the above

Answer: A

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3. The length and the breadth of a rectangular field are 240 m and 180 m respectively. It is fenced with three rounds of a rope. Find the length of the rope.

4. The length and the breadth of a rectangle are in the ratio 3:2 if its perimeter is 1 m 40 cm. find its dimensions.

A. 24cm , 16cm

B. 84m , 56m

C. 90cm , 50cm

D. None of these

Answer: B

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5. The cost of fencing a rectangular field at Rs 24 per metre is Rs 1980. if its length is 23 m. find its breadth.

A. 27.25 m.

B. 14 m

C. 18.25 m

D. 10 m

Answer: C

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6. Find the perimeter of a square, each of whose sides measures 3.6 cm.

A. $= 14.4cm$

B. $= 24.4cm$

C. $= 34.4cm$

D. $= 12.4cm$

Answer: A

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7. The cost of fencing a square field at Rs 125 per metre is Rs 8000. find the length of each side of the field.

A. 32m.

B. 80m.

C. 16m.

D. 252m

Answer: C

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8. Find the perimeter of an equilateral triangle with each side measuring 5.8 cm.

A. 15.4m.

B. 17.4m.

C. 16.4m.

D. 18.4m.

Answer: B

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9. Find the perimeter of a regular hexagon having each side equal to 6.5 cm.

A. 39m

B. 32.5cm

C. 78cm

D. None of these

Answer: A

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10. Find the circumference of a circle of radius 14 cm.

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11. Find the diameter of a circle whose circumference is 66 cm.

A. 22 cm

B. 21cm

C. 23 cm

D. 24 cm

Answer: B

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12. The diameter of a wheel of a car is 70 cm. find the distance covered by the car during the time in which the wheel makes 1000 revolutions.

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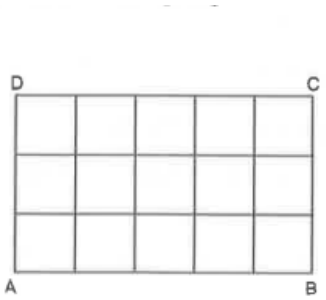
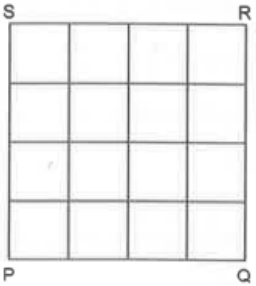
13. Consider the following regions:



(i)



(ii)

Find the area of each region .area of each square is $1cm^2$

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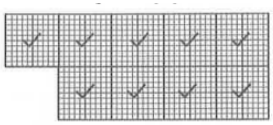
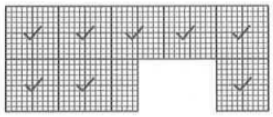
14. The following figures are drawn on squared paper. Count the number of squares enclosed

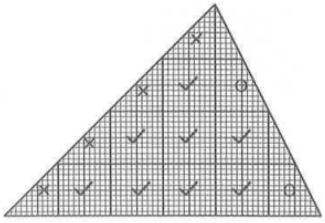
by each figure and ifnd its area, taking the area of each square as $1cm^2$.



(i)



(ii)



(iii)

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15. Find the area of a rectangle whose length and breadth are 45 cm and 18 cm respectively. Also, find the perimeter of the rectangle.

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16. Find the area and perimeter of a rectangular plot of land whose length and breadth are 28.5 m and 20 m respectively.

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17. Find the cost of cultivating a rectangular field 80 m long and 35 m wide at Rs 15 per square metre. Also, find the cost of fencing the field at Rs 24 per metre.

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18. The area of a rectangle is 630 cm^2 and its length is 35 cm. find the perimeter of the rectangle.

A. 106 cm

B. 53 cm

C. 325 cm

D. 44 cm

Answer: A

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19. A room is 20 m long and 18 m broad. Find the cost of carpeting the room with a carpet of width 1.5 m at the rate of Rs 60 per metre.

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20. The total cost of flooring a room at Rs 85/ m^2 is Rs 5100. if the length of the room is 8 metres. Find its breadth.

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21. A room is 8 m long and 6 m wide. Its floor is to be covered with rectangular tiles of size 25 cm by 20 cm. how many tiles will be required ?

A. 960

B. 600

C. 500

D. 650

Answer: A

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22. How many square tiles each of side 0.5 m will be required to pave the floor of a room which is 4 m long and 3 m broad?

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Exercise 21 A

1. Find the perimeter of a rectangle in which:

(i) length=16.8 cm and breadth =6.2 cm

(ii) length=2m 25cm and breadth=1m 50cm

(iii) length=8m 5dm and breadth =6m 8 dm

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2. Find the cost of fencing a rectangular field 62 m long and 33m wide at Rs 16 per metre.

A. 30400Rs.

B. Rs. 3040

C. Rs. 1520

D. Rs. 190

Answer: B

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3. The length and the breadth of a rectangular field are in the ratio 5:3. if its perimeter is 128m, find the dimensions of the field.

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4. The cost of fencing a rectangular field at Rs 18 per metre is Rs 1980. if the width of the field

is 23m, find its length.

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5. The length and the breadth of a rectangular field are in the ratio 7:4 the cost of fencing the field at Rs 25 per metre is Rs 3300. find the dimensions of the field.

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6. Find the perimeter of square, each of whose sides measures:

(i) 3.8 cm

(ii) 4.6 m

(iii) 2m 5 dm

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7. The cost of putting a fence around a square field at Rs 35 per cm is Rs 4480. find the length of each side of the field.

A. 32m

B. 16m

C. 64m

D. None of these

Answer: A

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8. Each side of a square field measures 21m. Adjacent to this field, there is a rectangular field having its sides in the ratio 4:3. if the

perimeters of both the fields are equal, find the dimensions of the rectangular field.

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9. Find the perimeter of

(i) a triangle of sides 7.8 cm, 6.5 cm and 5.9 cm.

(ii) an equilateral triangle of side 9.4 cm.

(iii) an issosceles triangle with equal sides 8.5 cm each and third side 7 cm.

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10. Find the perimeter of

(i) a regular pentagon of side 8 cm.

(ii) a regular octagon of side 4.5 cm.

(iii) a regular decagon of side 3.6 cm.

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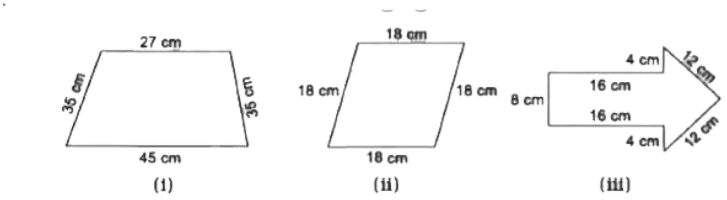
11. Find the perimeter of each of the following figures,



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Exercise 21 B

1. Find the circumference of a circle whose radius is

(i) 28 cm

(ii) 10.5 cm

(iii) 3.5 cm.

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2. Find the circumference of a circle whose diameter is

(i) 14 cm

(ii) 35 cm

(iii) 10.5 m

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3. Find the radius of a circle whose circumference is 176 cm.

A. 38cm

B. 28cm

C. 18cm

D. 25cm

Answer: B

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4. Find the diameter of a wheel whose circumference is 264 cm.

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5. Find the distance covered by the wheel of a car in 500 revolutions if the diameter of the wheel is $77cm$.

A. $1,310$ m

B. $1,212$ m

C. $1,230$ m

D. $1,210$ m

Answer: D

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6. The diameter of the wheel of a car is 70 cm. how many revolutions will its make travel 1.65 km?

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Exercise 21 C

1. The following figures are drawn on a sheet of squared paper. Count the number of

squares enclosed by each figure and find its area, taking the area of each square as $1cm^2$.

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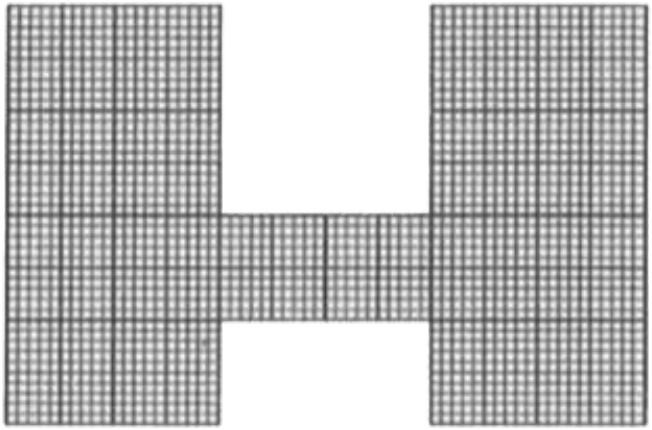
2. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure annd find its area,

taking the area of each square as $1cm^2$.

2. 

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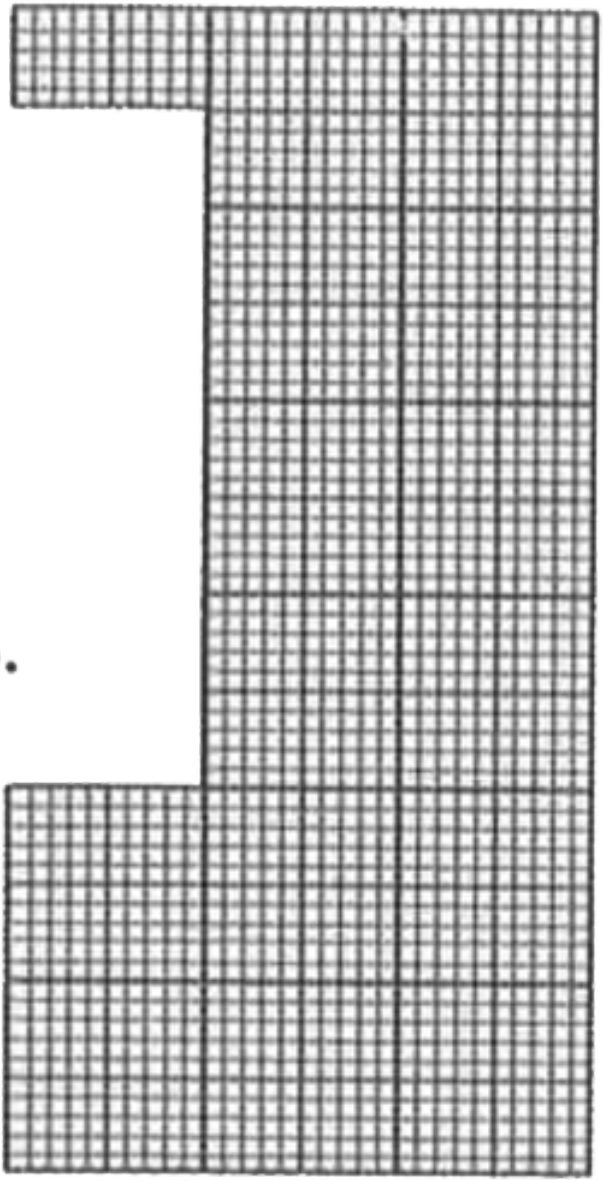
3. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure and find its area,

taking the area of each square as 1cm^(2).

3.



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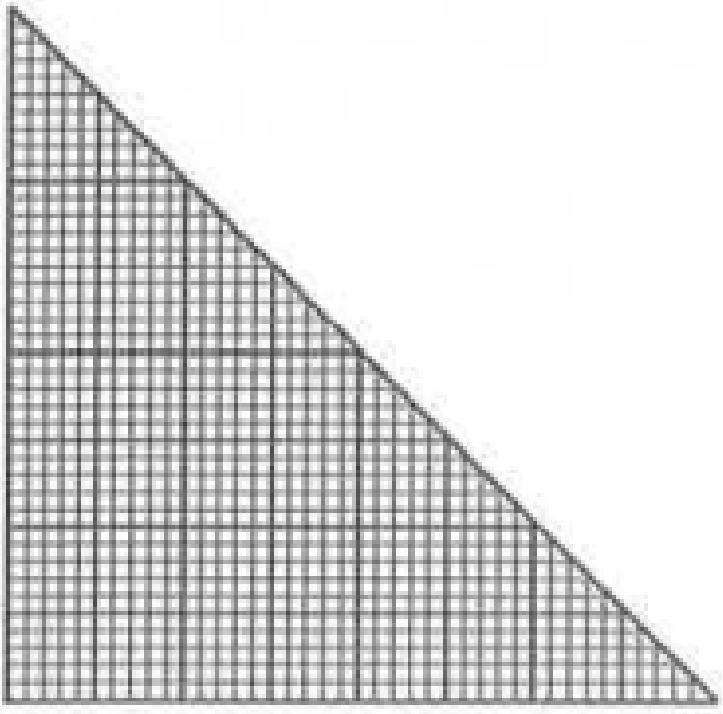
4. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure annd find its area, taking the area of each square as $1cm^2$.

i.



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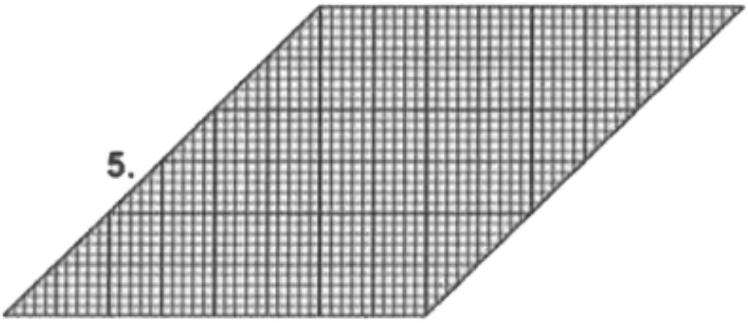
5. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure annd find its area, taking the area of each square as $1cm^2$.



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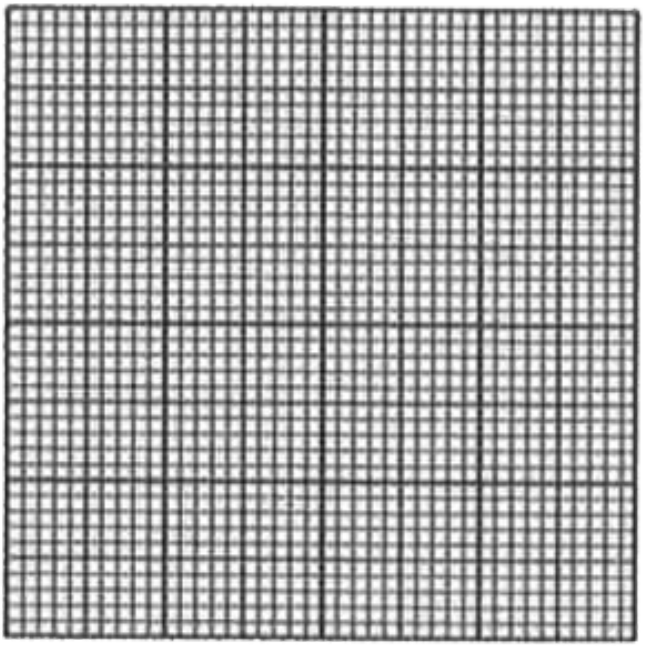
6. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure annd find its area, taking the area of each square as $1cm^2$.

6.



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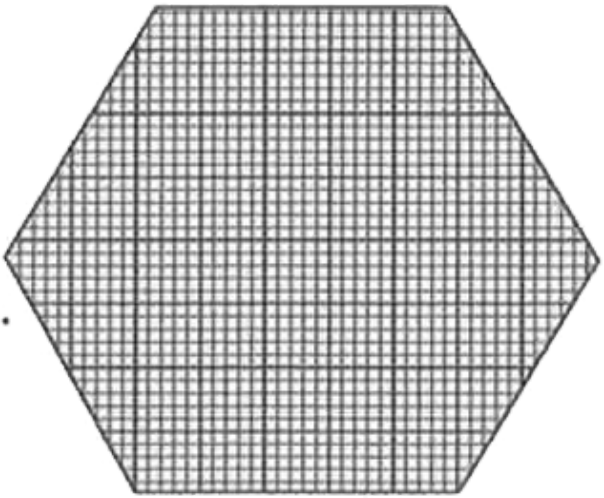
7. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure and find its area, taking the area of each square as $1cm^2$.

8.



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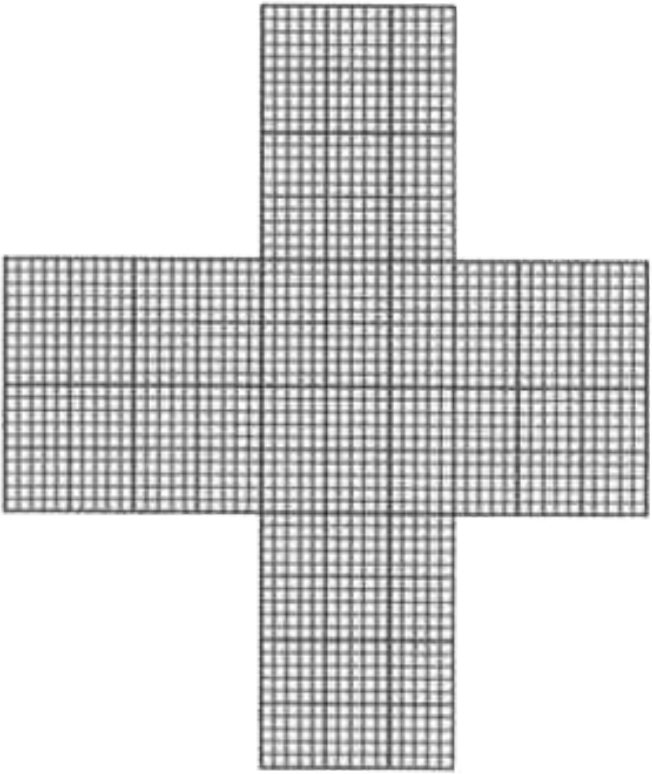
8. The followingfigures are drawn on a sheet of squared paper. Count the number of squares enclosed by each figure annd find its area,

taking the area of each square as $1cm^2$.

9. 

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Exercise 21 D

1. Find the area of a rectangle whose

(i) length=46 cm and breadth=25cm

(ii) length=9m and breadth=6m

(iii) length=14.5 m and breadth=6.8 m

(iv) length=2m 5cm and breadth=60cm

(v) length=3.5 km and breadth=2km

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2. Find the area of a sqaure plot of side 14m.

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3. The top of a table measures 2m and 25 cm by 1 m 20 cm. find its area in square metres.

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4. A carpet is 30 m 75 cm long and 80 cm wide. Find its cost at Rs 150 per square metre.

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5. how many envelopes can be made out of a sheet of paper 3 m 24 cm by 1 m 72 cm, if each envelope requires a piece of paper of size 18 cm by 12 cm?

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6. A room is 12.5 m long and 8 m wide. A square carpet of side 8 m is laid on its floor. Find the area of the floor which is not carpeted.

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7. A lane, 150 m long and 9 m wide, is to be paved with bricks, each measuring 22.5 cm by 7.5 cm. find the number of bricks required.

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8. A room is 13 m long and 9 m broad. Find the cost of carpenting the room which a carpet 75 cm broad at the rate of Rs 65 per metre.

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9. The length and the breadth of a rectangular park are in the ratio 5:3 and its perimeter is 128m. Find the area of the park.

A. $760m^2$

B. $120m^2$

C. $960m^2$

D. $64m^2$

Answer: C

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10. Two plots of land have the same perimeter. One is a square of side 64m and the other is rectangle of length 70m. Find the breadth of the rectangular plot. Which plot has the greater area and by how much?

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11. The cost of cultivating a rectangular field at Rs 35 per square metre is Rs 71400. if the

width of the field is 40m, find its length. Also, find the cost of fencing the field at Rs 50 per metre.

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12. The area of a rectangle is $540cm^2$ and its length is 36cm. Find its width and perimeter.

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13. A marble tile measures $12cm \times 10cm$. How many tiles will be required to cover a wall of size 4 m by 3m ? Also, find the total cost of the tiles at 22.50 per tile.

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14. Find the perimeter of a rectangle whose area is $600cm^2$ and breadth is 25 cm.

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15. Find the area of a sqaure whose diagonal is $5\sqrt{2}cm.$

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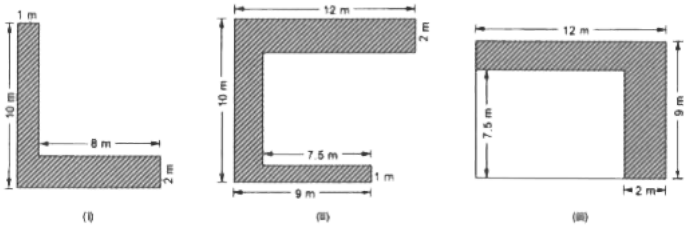
16. Calculate the area of each one of the shaded regions given below:



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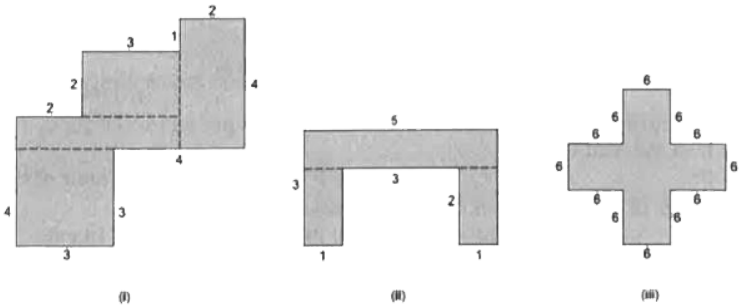
17. Calculate the area of each one of the shaded regions given below (all measures are given in cm):



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Exercise 21 E

1. The sides of a rectangle are in the ratio 7:5 and its perimeter is 96 cm. the length of the rectangle is

A. 21 cm

B. 28 cm

C. 35 cm

D. 14 cm

Answer: B

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2. The area of a rectangle is $650cm^2$ and its breadth is 13cm. The perimeter of the rectangle is

A. 63 cm

B. 130cm

C. 100cm

D. 126 cm

Answer: D

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3. The cost of fencing a rectangular field 34 m long and 18 m wide at Rs 22.50 per metre is

A. Rs 2430

B. Rs 2340

C. Rs 2400

D. Rs 3340

Answer:

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4. The cost of fecing a rectangular field at Rs 30 per metre is Rs 2400. if the length of the field is 24m, then its breadth is

A. 8m

B. 16m

C. 18m

D. 24m

Answer:

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5. The area of a rectangular carpet is $120m^2$ and its perimeter is 46m. The length of its diagonal is

A. 15m

B. 16m

C. 17m

D. 20m

Answer: C

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6. The length of a rectangle is three times its width and the length of its diagonal is $6\sqrt{10}$ cm. The perimeter of the rectangle is

A. $48cm$

B. $36cm$

C. $24cm$

D. $24\sqrt{10}cm$

Answer: A

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7. If the ratio between the length and perimeter of a rectangular plot is 1:3, then the ratio between the length and breadth of the plot is

A. $1:2$

B. $2:1$

C. $3:2$

D. $2:3$

Answer:

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8. The length of the diagonal of a square is 20 cm. its area is

A. $400cm^2$

B. $200cm^2$

C. $300cm^2$

D. $100\sqrt{2}cm^2$

Answer: B

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9. The cost of putting fence around a square field at Rs 25 per metre is Rs 2000. the length of each side of the field is

A. 80 m

B. 40m

C. 20m

D. none of these

Answer:

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10. The diameter of a circle is 7 cm. its circumference is

A. 44cm

B. 22cm

C. 28cm

D. 14cm

Answer:

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11. The circumference of a circle is 88cm. Its diameter is

A. 28cm

B. 42cm

C. 56cm

D. none of these

Answer:

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12. The diameter of wheel of a car is 70 cm. how much distance will it cover in making 50 revolutions?

A. 350m

B. 110m

C. 165m

D. 220m

Answer:

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13. A lane 150 m long and 9 m wide is to be paved with bricks, each measuring 22.5 cm by 7.5 cm. how many bricks are required?

A. 65000

B. 70000

C. 75000

D. 80000

Answer:

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14. A room is 5 m 40 cm long and 4 m 50 cm broad. Its area is

A. $23.4m^2$

B. $24.3m^2$

C. $25m^2$

D. $98.01m^2$

Answer:

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15. How many envelopes can be made out of a sheet of paper 72 cm by 48 cm, if each envelope requires a paper of size 18 cm by 12 cm?

A. 4

B. 8

C. 12

D. 16

Answer: A

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Test Paper 21

1. Find the perimeter of the following shapes:

(i) a triangle whose sides are 5.4 cm, 4.6 cm and 6.8 cm

(ii) a regular hexagon of side 8 cm

(iii) an isosceles triangle with equal sides 6 cm each and third side 4.5 cm.

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2. The perimeter of a rectangular field is 360m and its breadth is 75m. Find its length.

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3. The length and breadth of a rectangular field are in the ratio 5:4. if its perimeter is 108m, find the dimensions of the field.

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4. Find the area of a square whose perimeter is 84 cm.

A. $21cm^2$

B. $441cm^2$

C. $7056cm^2$

D. None of these

Answer: B

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5. The area of a room is $216cm^2$ and its breadth is 12cm. Find the length of the room.

A. 18m

B. 9m

C. 54m

D. 16m

Answer: A

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6. find the circumference of a circle of radius 7 cm. [Take $\pi = \frac{22}{7}$]

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7. The diameter of a wheel of a car is 77cm. Find the distance covered by the wheel in 500 revolutions.

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8. Find the diameter of a wheel whose circumference is 176 cm.

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9. Find the area of a rectangle whose length is 36 cm and breadth 15 cm.

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10. Perimeter of a square of side 16 cm is

A. 256 cm

B. 64 cm

C. 32cm

D. 48 cm

Answer:

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11. The area of a rectangle is $240m^2$ and its length is 16m. Then, its breadth is

A. 15m

B. 16m

C. 30m

D. 40m

Answer:

Watch Video Solution

12. The area of a square lawn of side 15 m is

A. $60m^2$

B. $225m^2$

C. $45m^2$

D. $120m^2$

Answer:

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13. The area of a square is $256cm^2$. The perimeter of the square is

A. 16cm

B. 32cm

C. 48cm

D. 64cm

Answer:

Watch Video Solution

14. The area of a rectangle is $126m^2$ and its length is 12m. The breadth of the rectangle is

A. 10m

B. 10.5 m

C. 11m

D. 11.5 m

Answer: B

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Test Paper 21 Fill In The Blanks

1. A polygon having all sides equal and all angles equal is called a ____polygon.

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2. Perimeter of a square=____xside.

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3. Area of a rectangle=(___) $\times$ (___).

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4. Area of a square=_____.

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5. if the length of a rectangle is 5 m and its breadth is 4m, then its area is _____

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6. Match the following:

(a) Area of a rectangle	(i) πr^2
(b) Area of a square	(ii) $4 \times$ side
(c) Perimeter of a rectangle	(iii) $l \times b$
(d) Perimeter of a square	(iv) $(\text{side})^2$
(e) Area of a circle	(v) $2(l + b)$

_____

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