MATHS

BOOKS - ARIHANT PUBLICATION

BIHAR

AREA

Example

1. The area of a triangle whose sides are 9 cm , 12 cm and 15 cm is

A. $54cm^2$

B. $60cm^2$

C. $64cm^2$

D. None of these

Answer: A

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2. The perimeter of a right angled triangle is 12 cm . The hypotenuse is 5 cm , then the area of the triangle is

A. $8cm^2$

B. $10cm^2$

C. $6cm^2$

D. None of these

Answer: C

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3. The perimeter of an equilateral triangle whose area is $4\sqrt{3}cm^2$ is equal to

(a) 10 cm

(b) 12 cm

(c) 15 cm

(d) 20 cm

A. 10 cm

B. 12 cm

C. 15 cm

D. 20 cm

Answer: B

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4. A rectangular plot is $180m^2$ in area. If its length is 18 m, then find its perimeter is

(a) 56 m

(b) 60 m

(c) 15 m

(d) 20 m

A. 56 m

B. 60 m

C. 15 m

D. 20m

Answer: A

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5. The area of the floor of a rectangular hall of length 40 m is $960m^2$. Carpets of size $6m \times 4m$ are available. Then , the number of carpets are required to cover the hall is

(a) 10

(b) 20

(c) 30

(d) 40

A. 10

B. 20

C. 30

D. 40

Answer: D

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Exam Booster For Cracking Exam

1. The length of the sides of a triangle are in the ratio $3:4:5$ and its perimeter is 144 cm. The area of the triangle is

A. $684cm^2$

B. $664cm^2$

C. $764cm^2$

D. $864cm^2$

Answer: D

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2. The area of an isosceles triangle each of whose equal sides is $13cm$ and whose base is $24cm$ is:

A. $60cm^2$

B. $55cm^2$

C. $50cm^2$

D. $40cm^2$

Answer: A

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3. The difference between the sides at right angles in a right - angled triangle is 14 cm . The area of the trangle is $120cm^2$. Calculate the perimeter of the triangle.

A. 68 cm

B. 64 cm

C. 60 cm

D. 58 cm

Answer: C

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4. A rectangular grassy plot is 110 m $\times$ 65m. It has a uniform path 2.5 m wide all around it on the inside . The area of the path is

A. $750m^2$

B. $850m^2$

C. $950m^2$

D. $1050m^2$

Answer: B

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5. Within a rectangular garden 10 m wide and 20 m long, we with to pave a walk around the borders of uniform width so as to leave an area of 96m2 for flowers. How wide should the walk be? (a) 1 m (b) 2 m (c) 2.1 m (d) 2.5 m

A. 1m

B. 2m

C. 2.5m

D. 2.56m

Answer: B

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6. The cost of levelling a rectangular ground at Rs.1.25 per m^2 is Rs.900. If the length of the ground is 30 m, then the width is

A. 6m

B. 18m

C. 24m

D. 36m

Answer: C

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7. If the area of a square with side 'b' is equal to the area of a triangle with base 'b' , then altitude of the triangle is

A. $\frac{b}{2}$

B. 2b

C. b

D. 4 b

Answer: B

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8. The adjacent sides of a parallelogram are 36 cm and 27 cm in length.If the distance between the shorter sides is 12 cm,then the distance between the longer sides is

A. 9 cm

B. 10 cm

C. 11 cm

D. 12 cm

Answer: A

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9. The area of a rhombus whose one side and one diagonal measure 20 cm and 24 cm respectively, is

A. $364cm^2$

B. $374cm^2$

C. $384cm^2$

D. $394cm^2$

Answer: C

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10. The area of the quadrilateral whose sides measured 9 cm, 40 cm, 28 cm and 15 cm and in which the angle between the first two sides is a right angle,is

A. $206cm^2$

B. $806cm^2$

C. $356cm^2$

D. $380cm^2$

Answer: B

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11. The area of the circle whose circumference is equal to the perimeter of a square of side 11 cm is

A. $154cm^2$

B. $144cm^2$

C. $134cm^2$

D. $124cm^2$

Answer: A

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12. A horse is tied to a pole with 28m long string. Find the area where the horse can

graze. $\left(Take \pi \frac{22}{7}\right)$

A. $246m^2$

B. $2404m^2$

C. $2464m^2$

D. $2164m^2$

Answer: C

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13. A field is in the form of a circle.The cost of plough the field at Rs. 1.50 per m^2 is Rs.5775. The cost of fencing the field at Rs.8.50 per m

A. Rs. 1870

B. Rs. 2870

C. Rs. 1970

D. Rs. 2970

Answer: A

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14. A bicycle wheel makes 5000 revolutions in moving 11 km. Find the diameter of the wheel.

A. 50 cm

B. 60 cm

C. 70 cm

D. 80 cm

Answer: C

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15. The diameter of the driving wheel of a bus is 140 cm. How many revolutions per minute must the wheel make in order to keep a speed of 66 km per hour?

A. 200

B. 250

C. 300

D. 350

Answer: B

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16. The base of an isosceles triangle measures 24 cm and its area is $192cm^2$, Find its perimeter.

A. 4 cm

B. 64 cm

C. 32 cm

D. 20 cm

Answer: B

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17. If the length and breadth of a rectangular plot are increassed by 50 % and 20 % respectively , then the new area is how many times the original area?

A. $4/5$

B. $9/5$

C. $3/5$

D. None of these

Answer: B

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18. The length of a rectangle is increased by 60%. By what percent would the width have to be reduced to maintain the same area ?

A. $37\ \%$

B. $32\ \%$

C. $37\frac{1}{2}\ \%$

D. None of these

Answer: C

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19. The perimeter of a rectangular field is 240 m and the ratio between the length and breadth is 5: 3 . What is the area of field?

A. $3370m^2$

B. $3735m^2$

C. $3375m^2$

D. None of these

Answer: C

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20. In a four sider- field , the length of the longer diagonal is 128 m. the lengths of perpendiculars from the opposite vertices upon this diagonal are 22.7 m and 17.3 and Find the area of the field.

A. $128m^2$

B. $2560m^2$

C. $256m^2$

D. None of these

Answer: B

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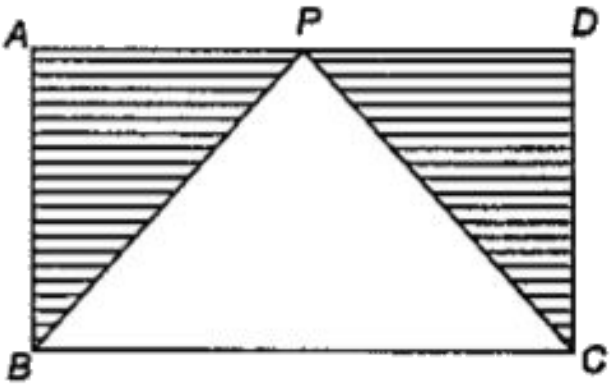
21. In the adjoining figure, AD = 2AB = a. If P is the mid-point of AD, then area of the shaded

region is



A. a^2

B. $\frac{a^2}{2}$

C. $\frac{a^2}{3}$

D. $\frac{a^2}{4}$

Answer: D

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22. A paper is in the form of a rectangle ABCD and AB = 18 cm, BC = 14 cm. A semi-circular passing with BC as diameter is cut off. Area of the remaining paper is

A. $252cm^2$

B. $175cm^2$

C. $77cm^2$

D. None of these

Answer: B

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23. A paper is in the form of a square of side 20 m. Semi-circles are drawn inside the square paper on two opposite sides as diameter. The semi-circular portions are cut off. Area of the remaining paper is

A. $(400 - 100\pi)m^2$

B. $100\pi m^2$

C. $400m^2$

D. None of these

Answer: A

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24. In a circle of radius 42 cm, an arc subtends an angel of 72° at the centre. What is the length of the arc?

A. 52.8 cm

B. 42 cm

C. 52 cm

D. 44 cm

Answer: A

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25. Two circles touch externally. The sum of their areas is 130 $\pi sq\dot{c}m\cdot$ and the distance between their centres is 14cm. Find the radii of the circles.

A. 11 cm, 3 cm

B. 14 cm, 5 cm

C. 13 cm, 9 cm

D. None of these

Answer: A

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26. The ratio of the areas of the incircle and circumcircle of a square is

A. $1:2$

B. $1:3$

C. $2:1$

D. None of the above

Answer: A

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27. The area of circle inscribed in an equilateral triangle of side 12 cm is

A. $12cm^2$

B. πcm^2

C. $12\pi cm^2$

D. None of these

Answer: C

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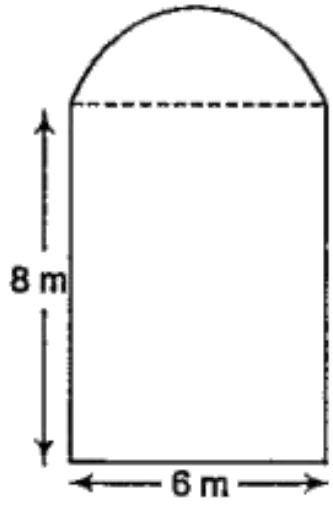
28. The cross-section of a railway tunnel is a rectangle 6 m broad and 8 m high, surrounded by a semi-circle as shown in the adjoining

figure. The tunnel is 35 m long. What is the cost of plastering the internal surface of the tunnel excluding the floor at the rate of $Rs.\ 3$ per m^2 ?



A. Rs. 267

B. Rs. 270

C. Rs. 2670

D. None of these

Answer: C

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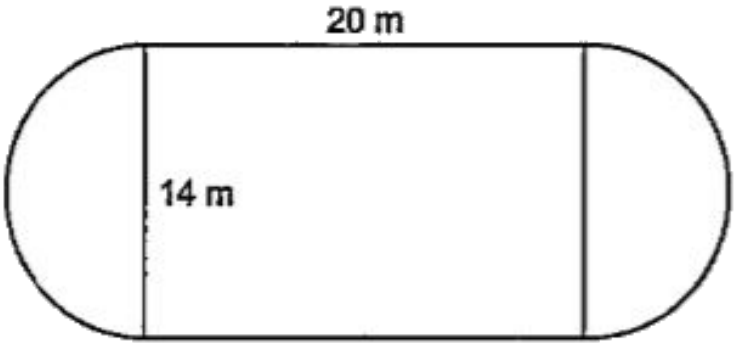
29. A garden is in the form of a rectangle with semi-circular ends on the either side as shown in the diagram below. The length and breadth of the rectangle are 20 m and 14 m, respectively. The cost of leveling the plot at 25

per m^2 is



A. Rs. 10850

B. Rs. 434

C. Rs. 25

D. None of these

Answer: A

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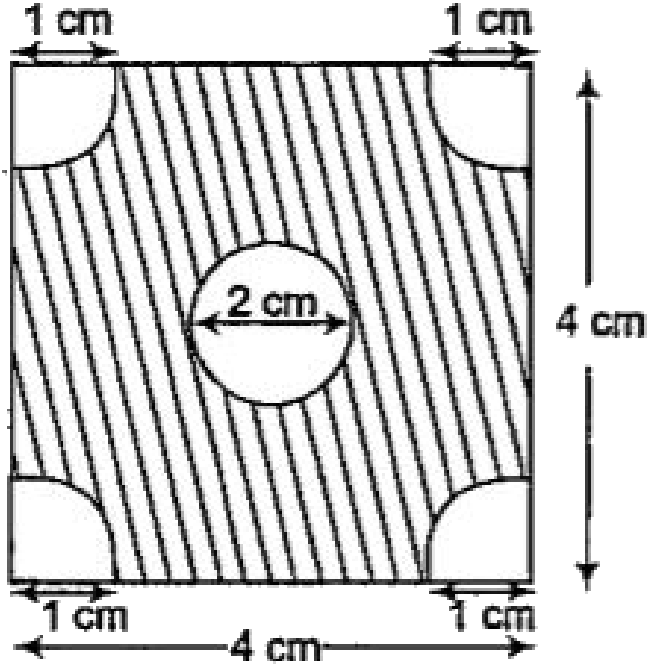
30. The four corners are circle quadrants and at the centre there is a circle. The area of shaded region is



A. $(16 - \pi)cm^2$

B. $(16 - 2\pi)cm^2$

C. $(16 - 2\pi)m^2$

D. None of these

Answer: B

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