



MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

AREA

All Questions

1. Find the maximum distance between two points on the perimeter of a rectangular

garden whose length and breadth are 100 m and 50 m.



Watch Video Solution

2. One side of a rectangular field is 15 m and one of its diagonals is 17 m. Find the area of the field.



Watch Video Solution

3. A lawn is in the form of a rectangle having its sides in the ratio 2:3. The area of the lawn is $\frac{1}{6}$ hectares. Find the length and breadth of the lawn.



Watch Video Solution

4. Find the cost of carpeting a room 13 m long and 9 m broad with a carpet 75 cm wide at the rate of Rs 12.40 per square metre.



Watch Video Solution

5. The length of a rectangle is twice its breadth. If its length is decreased by 5 cm and breadth is increased by 5 cm, the area of the rectangle is increased by 75 sq. cm. Find the length of the rectangle.



Watch Video Solution

6. A rectangular carpet has area $120m^2$ and perimeter 46 metres. The length of its diagonals is 15m (b) 16m (c) 17m (d) 20m



[Watch Video Solution](#)

7. The length of a rectangle is increased by 30%. By what percent would the breadth have to be decreased to maintain the same area?



[Watch Video Solution](#)

8. In measuring the sides of a rectangular plot, one side is taken 5% in excess and the other

6% in deficit. Find the error percent in area calculated, of the plot.



Watch Video Solution

9. Instead of walking along two adjacent sides of a rectangular field, a boy took a short cut along the diagonal and saved the distance equal to half of the longer side. Then the ratio of the shorter side to the longer side is



Watch Video Solution

10. Two perpendicular cross roads of equal width run through the middle of a rectangular field of length 80 m and breadth 60 m. If the area of the cross roads is 675 m^2 , find the width of the roads.



Watch Video Solution

11. A rectangular grassy plot 110 m by 65 m has a gravel path 2.5 m wide all around it on the inside. Find the cost of gravelling the path at 80 paise per sq. metre.



[Watch Video Solution](#)

12. The diagonal of a rectangular field is 15 m and its area is 108 sq. m. What will be the total expenditure in fencing the field at the rate of Rs 5 per metre?



[Watch Video Solution](#)

13. The perimeters of two squares are 40 cm and 32 cm, Find the perimeter of the third

square whose area is equal to the difference of the areas of the two squares.



Watch Video Solution

14. The length of a rectangle R is 10% more than the side of a square S . The width of the rectangle R is 10% less than the side of the square S . What is the ratio of the area of R to that of S ?



Watch Video Solution

15. Find the largest size of a bamboo that can be placed in a square of area 100 sq. m.



Watch Video Solution

16. A rectangular courtyard, 3.78 m long and 5.25 m broad, is to be paved exactly with square tiles, all of the same size. Find the least number of square tiles covered.



Watch Video Solution

17. Find the area of a square, one of whose diagonals is 3.8 m long.



Watch Video Solution

18. The diagonals of two squares are in the ratio of 2 : 5. Find the ratio of their areas.



Watch Video Solution

19. On increasing each side of a square by 25%,
the increase in area will be

25%

(b) 55%

55.5%

(d) 56.25%



Watch Video Solution

20. If the diagonal of a square is decreased by 15%, find the percentage decrease in its area.



Watch Video Solution

21. A square park is surrounded by a path of uniform width 2 metres all around it. The area

of the path is 288 sq. metres. Find the perimeter of the park.



Watch Video Solution

22. If the side of a square is increased by 8 cm, its area increases by 120 sq. cm. Find the side of the square.



Watch Video Solution

23. If the length of a certain rectangle is decreased by 4 cm and the width is increased by 3 cm, a square with the same area as the original rectangle would result. Find the perimeter of the original rectangle.



Watch Video Solution

24. The dimensions of a room are 12.5 m by 9m by 7m. There are 2 doors and 4 windows in the room; each door measures 2.5 m by 1.2 m and

each window 1.5m by 1 m. Find the cost of painting the walls at Rs. 3.50 per square metre.



[Watch Video Solution](#)

25. A room is half as long again as it is broad. The cost of carpeting the room at Rs 5 per sq. m is Rs 270 and the cost of papering the four walls at Rs 10 per m^2 is Rs 1720. If a door and 2 windows occupy 8 sq. m, find the dimensions of the room.



[Watch Video Solution](#)

26. The cost of fencing an equilateral triangular park and a square park is the same. If the area of the triangular park is $16\sqrt{3} \text{ m}^2$, find the length of the diagonal of the diagonal of the square park.



Watch Video Solution

27. The altitude drawn to the base of an isosceles triangle is 8 cm and the perimeter is 32 cm. Find the area of the triangle.



[Watch Video Solution](#)

28. Find the length of the altitude of an equilateral triangle of side $3\sqrt{3} \text{ cm}$.



[Watch Video Solution](#)

29. The base and altitude of a right angled triangle are 12 cm and 5 cm respectively. Find the perpendicular distance of its hypotenuse from the opposite vertex.



[Watch Video Solution](#)

30. In two triangles, the ratio of the areas is 4 : 3 and the ratio of their heights is 3 : 4. Find the ratio of their bases.



[Watch Video Solution](#)

31. If the height of a triangle is increased by 30% and its base is decreased by 20%, what will be the effect on its area?



[Watch Video Solution](#)

32. The base of a parallelogram is twice its height. If the area of the parallelogram is 72 sq. cm, find its height.



Watch Video Solution

33. Find the area of a rhombus, each side of which measures 20 cm and one of whose diagonals is 24 cm.



Watch Video Solution

34. The length of one side of a rhombus is 6.5 cm and its altitude is 10 cm. If the length of one of its diagonals is 26 cm, find the length of the other diagonal.



Watch Video Solution

35. The difference between two parallel sides of a trapezium is 4 cm. The perpendicular distance between them is 19 cm. If the area of

the trapezium is 475 cm^2 , find the lengths of the parallel sides.



Watch Video Solution

36. Find the length of a rope by which a cow must be tethered in order that it may be able to graze an area of 9856 sq. metres.



Watch Video Solution

37. The area of a circular field is 13.86 hectares.
Find the cost of fencing it at the rate of Rs
4.40 per metre.



Watch Video Solution

38. The circumferences of two circles are in the
ratio 2 : 3. Find the ratio of their areas.



Watch Video Solution

39. If a wire of 440 metres length is moulded in the form of a circle and a square turn by turn, find the ratio of the area of the circle to that of the square.



Watch Video Solution

40. A circular wire of diameter 42 cm is bent in the form of a rectangle whose sides are in the ratio 6 : 5. Find the area of the rectangle.



Watch Video Solution

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



Watch Video Solution

42. A wheel makes 1000 revolutions in covering a distance of 88 km. Find the radius of the wheel.



Watch Video Solution

43. A circular grassy plot of land $42m$ in diameter has a path $3.5m$ wide running round it on the outside. Find the cost of gravelling the path at Rs 4 per square metre.



Watch Video Solution

44. The inner circumference of a circular race track, 14 m wide, is 440 m . Find the radius of the outer circle.

[Watch Video Solution](#)

45. Two concentric circles form a ring. The inner and outer circumferences of the ring are $50\frac{2}{7}m$ and $75\frac{3}{7}m$ respectively. Find the width of the ring.

[Watch Video Solution](#)

46. If the cost of gardening is Rs 85 per square metre then what will be the cost of gardening

1.4 metre wide strip inside around a circular field having an area of 1386 square metres?



Watch Video Solution

47. The radii of three concentric circles are in the ratio 1:2:3. Find the ratio of the area between the two inner circles to that between the two outer circles.



Watch Video Solution

48. In a circle of radius 35 cm, an arc subtends an angle of 72° at the centre. Find the length of the arc and area of the sector.



Watch Video Solution

49. The minute hand of a watch is 1.5 cm long. How far does its tip move in 40 minutes? (Use $\pi = 3.14$).



Watch Video Solution

50. A sector of 120° , cut out from a circle, has an area of $9\frac{3}{7}$ sq cm. Find the radius of the circle.



Watch Video Solution

51. Find the area of the largest circle that can be drawn inside a rectangle with sides 7 m by 6 m.



Watch Video Solution

52. Find the ratio of the areas of the incircle and circumcircle of a square.



Watch Video Solution

53. Four horses are tied on the four corners of a square field of length 14 m so that each horse can just touch the other two horses. They were able to graze in the area accessible to them for 11 days. For how many days is the ungrazed area sufficient for them?



Watch Video Solution

54. If the radius of a circle is decreased by 50%, find the percentage decrease in its area.



Watch Video Solution

55. If the radius of a circle is increased by 20% then by how much will its area be increased?



Watch Video Solution

56. The radius of a circle is so increased that its circumference increased by 5%. Find the percentage increase in its area.



Watch Video Solution

57. The area of a circle whose radius is 6 cm, is trisected by two concentric circles. Find the radius of the smallest circle.



Watch Video Solution

58. If a rectangle has length L and the width is one-half of the length, then the area of the rectangle is (a) L (b) L^2 (c) $\frac{1}{2}L^2$ (d) $\frac{1}{4}L^2$ (e) $2L$



Watch Video Solution

59. The length of a room is 5.5 m and width is 3.75 m. Find the cost of paving the floor by slabs at the rate of Rs 800 per sq. metre. (a) Rs 15,000 (b) Rs 15,550 (c) Rs 15,600 (d) Rs 16,500



[Watch Video Solution](#)

60. The area of a rectangular field is 2100 sq. metres. If the field is 60 metres long, what is its perimeter? (a) 180 m (b) 210 m (c) 240 m (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

61. The length of a rectangle is 18 cm and its breadth is 10 cm. When the length is increased to 25 cm, what will be the breadth of the rectangle if the area remains the same? (a) 7 cm (b) 7.1 cm (c) 7.2 cm (d) 7.3 cm



Watch Video Solution

62. A rectangular plot measuring 90 metres by 50 metres is to be enclosed by wire fencing. If the poles of the fence are kept 5 metres apart,

how many poles will be needed? (a) 55 (b) 56 (c) 57 (d) 58



Watch Video Solution

63. The length of a rectangular plot is 60% more than its breadth. If the difference between the length and the breadth of that rectangle is 24 cm, what is the area of that rectangle? (a) 2400 sq. cm (b) 2480 sq. cm (c) 2560 sq. cm (d) Data inadequate (e) None of these

[Watch Video Solution](#)

64. A rectangular parking space is marked out by painting three of its sides. If the length of the unpainted side is 9 feet, and the sum of the lengths of the painted sides is 37 feet, then what is the area of the parking space in square feet? (a) 46 (b) 81 (c) 126
(d) 252

[Watch Video Solution](#)

65. The difference between the length and breadth of a rectangle is 23 m. If its perimeter is 206 m, then its area is (a) 1520 m^2 (b) 2420 m^2 (c) 2480 m^2 (d) 2520 m^2



Watch Video Solution

66. The total cost of flooring a room at Rs 8.50 per square metre is Rs 510. If the length of the room is 8 metre, then its breadth is:



Watch Video Solution

67. The length of a rectangular plot is thrice its breadth. If the area of the rectangular plot is 7803 sq. metres, What is the breadth of the rectangular plot? (a) 51m (b) 88m (c) 104m (d) 153m (e) None of these



Watch Video Solution

68. The perimeter of a rectangle is 60 metres. If its length is twice its breadth, then its area

is (a) 160 m² (b) 180 m² (c) 200 m² (d)

220 m²



Watch Video Solution

69. A man is walking in a rectangular field whose perimeter is 6 km. If the area of the rectangular field be 2 sq. km, then what is the difference between the length and breadth of the rectangle? (a) $\frac{1}{2}$ km (b) 1km (c) $1\frac{1}{2}$ km (d) 2km



Watch Video Solution

70. The area of a rectangle is 252 cm^2 and its length and breadth are in the ratio of 9:7 respectively. What is its perimeter? (a) 64 cm (b) 68 cm (c) 96 cm (d) 128 cm



Watch Video Solution

71. The length of a rectangular plot is 20 metres more than its breadth. If the cost of fencing the plot @ Rs 26.50 per metre is Rs 5300, what is the length of the plot in metres?

(a) 40

(b) 50

(c) 120 (d) Data

inadequate

(e) None of these



Watch Video Solution

72. A carpenter is designing a table. The table will be in the form of a rectangle whose length is 4 feet more than its width. How long should the table be if the carpenter wants the area of the table to be 45 sq ft? (a) 6 ft (b) 9 ft (c) 11 ft (d) 13 ft



Watch Video Solution

73. The perimeter of a rectangular field is 480 metres and the ratio between the length and the breadth is 5:3. The area is (a) 1350 sq. m (b) 1550 sq. m (c) 13500 sq. m (d) 15500 sq. m



Watch Video Solution

74. A rectangular farm has to be fenced on one long side, one short side and the diagonal. If the cost of fencing is Rs 100 per m, the area of the farm is 1200 m² and the short

side is 30 m long, how much would the job cost? (a) Rs 7000 (b) Rs 12000 (c) Rs 14000 (d) Rs 15000



Watch Video Solution

75. The breadth of a rectangular field is 60% of its length. If the perimeter of the field is 800 m, what is the area of the field? (a) 18750 sq. m (b) 37500 sq. m (c) 40000 sq. m (d) 48000 sq. m



Watch Video Solution

76. 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.....



Watch Video Solution

77. The ratio between the length and the breadth of a rectangular park is $3:2$. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8

minutes, then the area of the park (in sq. m) is

- (a) 15360sq. m (b) 153600sq. m (c) 30720sq. m (d) 307200sq. m



Watch Video Solution

78. The area of a rectangle is 460 square metres. If the length is 15% more than the breadth, what is the breadth of the rectangular field? (a) 15 metres (b) 26 metres (c) 34.5 metres (d) Cannot be determined (e) None of these

[Watch Video Solution](#)

79. The area of a rectangular field is 52000 m^2 .

This rectangular area has been drawn on a map to the scale 1 cm to 100 m. The length is shown as 3.25 cm on the map. The breadth of the rectangular field is (a) 150m (b) 160m
(c) 200.5m (d) 300.5m

[Watch Video Solution](#)

80. A rectangular field is to be fenced on three sides leaving a side of 20 feet uncovered. If the area of the field is 680 sq. feet, how many of fencing will be required?



Watch Video Solution

81. A farmer wishes to grow a $100m^2$ rectangular vegetable garden. Since he has with the only 30 m barbed wire, he fences three sides of the rectangular garden letting

compound wall of his house act as the fourth side-fence. Find the dimensions of his garden.



Watch Video Solution

82. The ratio of length and breadth of a rectangle is 3:2 respectively. The respective ratio of its perimeter and area is 5:9. What is the breadth of the rectangle in metres? (a) 6m (b) 8m (c) 9m (d) 13m (e) None of these



Watch Video Solution

83. A rectangle of certain dimensions is chopped off from one corner of a larger rectangle as shown. $AB = 8\text{cm}$ and $BC = 4\text{cm}$. The perimeter of the figure $ABCPQRA$ (in cm) is (a) 24 (b) 28 (c) 36 (d) 48



Watch Video Solution

84. A large field of 700 hectares is divided into two parts. The difference of the areas of the

two parts is one-fifth of the average of the two areas. What is the area of the smaller part in hectares? (a) 225 (b) 280 (c) 300
(d) 315



Watch Video Solution

85. A rectangular paper, when folded into two congruent parts had a perimeter of 34 cm for each part folded along one set of sides and the same is 38 cm when folded along the other set of sides. What is the area of the

paper? (a) 140cm^2 (b) 240cm^2 (c) 560cm^2

(d) None of these



Watch Video Solution

86. A rectangular plot is half as long again as it is broad and its area is $\frac{2}{3}$ hectares. Then, its length is (a) 100m (b) 33.33m (c) 66.66m (d)

$$\frac{100\sqrt{3}}{3} m$$



Watch Video Solution

87. An artist has completed one-fourth of a rectangular oil painting. When he will paint another 100 square centimetres of the painting, he would complete three-quarters of the painting. If the height of the oil painting is 10 cm, determine the length (in cm) of the oil painting. (a) 10 (b) 15 (c) 20 (d) 25



Watch Video Solution

88. A courtyard 25m long and 16m broad is to be paved with bricks of dimensions 20cm by 10cm. The total number of bricks required is
(a) 18000 (b) 20000 (c) 25000 (d) None of these



Watch Video Solution

89. How many metres of carpet 63 cm wide will be required to cover the floor of a room 14 m

by 9 m? (a) 185m (b) 200m (c) 210m
(d) 220m



Watch Video Solution

90. The cost of carpeting a room 18m long with a carpet 75cm wide at Rs 4.50 per metre is Rs 810. The breadth of the room is (a) 7m (b) 7.5m (c) 8m (d) 8.5m



Watch Video Solution

91. The diagonal of the floor of a rectangular closet is $7\frac{1}{2}$ feet. The shorter side of the closet is $4\frac{1}{2}$ feet. What is the area of the closet in square feet? (a) $5\frac{1}{4}$ (b) $13\frac{1}{2}$ (c) 27 (d)

37



Watch Video Solution

92. The length of a rectangle is three times of its width. If the length of the diagonal is $8\sqrt{10}m$, then the perimeter of the rectangle

is: (a) $15\sqrt{10} m$ (b) $16\sqrt{10} m$ (c) $24\sqrt{10} m$ (d) $64m$



Watch Video Solution

93. The diagonal of a rectangle is thrice its smaller side. The ratio of the length to the breadth of the rectangle is (a) 3:1 (b) $\sqrt{3}:1$ (c) $\sqrt{2}:1$ (d) $2\sqrt{2}:1$



Watch Video Solution

94. The diagonal of a rectangle is 10 cms and is twice the length of one of the sides. What is the area of the rectangle in sq. cm? $10\sqrt{3}$ (b) 25 (c) $25\sqrt{3}$ (d) 100



Watch Video Solution

95. The diagonal of a rectangular field is 15 metres and the difference between its length and width is 3 metres. The area of the

rectangular field is (a) $9m^2$ (b) $12m^2$ (c)
 $21m^2$ (d) $108m^2$



Watch Video Solution

96. A rectangular carpet has area $120m^2$ and perimeter 46 metres. The length of its diagonals is 15m (b) 16m (c) 17m (d) 20m



Watch Video Solution

97. The diagonal of a rectangle is $\sqrt{41} \text{ cm}$ and its area is 20 sq. cm. The perimeter of the rectangle must be (a) 9 cm (b) 18 cm (c) 20 cm (d) 41 cm



Watch Video Solution

98. If the area of a rectangle is $\sqrt{3} d^2$, where $2d$ is the length of its diagonal, then its perimeter is equal to $4\sqrt{3}d$ (b) $2\sqrt{3}d$ (c) $4(\sqrt{3} + 1)d$ (d) $2(\sqrt{3} + 1)d$



[Watch Video Solution](#)

99. If the diagonal and the area of a rectangle are 25 m and 168m^2 , what is the length of the rectangle? (a) 12m (b) 17m (c) 24m (d) 31m

[Watch Video Solution](#)

100. A took 15 seconds to cross a rectangular field diagonally walking at the rate of 52 m/min and B took the same time to cross the

same field along its sides walking at the rate of 68 m/min. The area of the field is (a) 30m^2 (b) 40m^2 (c) 50m^2 (d) 60m^2



Watch Video Solution

101. A rectangular carpet has an area of 60 sq. m . If its diagonal and longer side together equal 5 times the shorter side, the length of the carpet is (a) 5m (b) 12m (c) 13m (d) 14.5m



Watch Video Solution

102. The ratio between the length and the breadth of a rectangular field is 3:2. If only the length is increased by 5 metres, the new area of the field will be 2600 sq. metres. What is the breadth of the rectangular field? (a) 40 metres (b) 60 metres (c) 65 metres (d) Cannot be determined (e) None of these



Watch Video Solution

103. The cost of carpeting a room is Rs 120. If the width had been 4 metres less, the cost of the carpet would have been Rs 20 less. The width of the room is (a) 18.5m (b) 20m
(c) 24m (d) 25m



Watch Video Solution

104. The length of a rectangular blackboard is 8 m more than its breadth. If its length is increased by 7m and its breadth is decreased

by 4 m, its area remains unchanged. The length and breadth of the rectangular blackboard is (a) 24m, 16m (b) 20m, 24m (c) 28m, 16m (d) 28m, 20m



Watch Video Solution

105. The area of a grassy plot is 480 sq. m. If each side had been 5 m longer, the area would have been increased by 245 sq. m. Find the length of the fence to surround it. (a) 87m (b) 88m (c) 90m (d) None of these



[Watch Video Solution](#)

106. The area of a rectangle gets reduced by 9 square units if its length is reduced by 5 units and the breadth is increased by 3 units. If we increase the length by 3 units and breadth by 2 units, the area is increased by 67 square units. Find the length and breadth of the rectangle.



[Watch Video Solution](#)

107. If each side of a rectangle is increased by 50%, its area will increase by (a) 50% (b) 125% (c) 150% (d) 200%



Watch Video Solution

108. An order was placed for supply of carpet of breadth 3 metre, the length of carpet was 1.44 times of breadth. Subsequently the breadth and length were increased by 25 and 40 percent respectively. At the rate of 45 per

square metre, what would be the increase in the cost of the carpet? (a) Rs 398.80 (b) Rs 437.40 (c) Rs 583.20 (d) Rs 1020.60 (e) None of these



Watch Video Solution

109. If the length of a rectangle is increased by 10% and its breadth is decreased by 10%, the change in its area will be (a) 1% increase (b) 1% decrease (c) 10% increase (d) No change



Watch Video Solution

110. Two sides of a rectangle were measured. One of the sides (length) was measured 10% more than its actual length and the other side (width) was measured 5% less than its actual length. The percentage error in measure obtained for the area of the rectangle is (a) 4.5% (b) 5% (c) 7.56% (d) 15%



Watch Video Solution

111. If the length of a rectangle is increased by 50% and breadth is decreased by 25%, what is the percentage change in its area? 12.5% increase (b) 10% increase (c) 25% increase (d) 20% decrease



Watch Video Solution

112. A towel, when bleached, was found to have lost 20% of its length and 10% of its breadth.

The percentage of decrease in area is (a)

10% (b) 10.08% (c) 20% (d) 28%



Watch Video Solution

113. The length of a rectangle is halved, while its breadth is tripled. What is the percentage change in area? 25% increase (b) 50% increase (c) 50% decrease (d) 75% decrease



Watch Video Solution

114. The length of a rectangle is decreased by $r\%$, and the breadth is increased by $(r + 5)\%$. Find r , if the area of the rectangle is unaltered. (a) 5 (b) 8 (c) 10 (d) 15 (e) 20



Watch Video Solution

115. The length of a rectangle is increased by 30%. By what percent would the breadth have to be decreased to maintain the same area?



Watch Video Solution

116. If the area of a rectangular plot increases by 30% while its breadth remains the same, what will be the ratio of the areas of new and old figures? (a) 1:3 (b) 3:1 (c) 4:7 (d) 10:13 (e) None of these



Watch Video Solution

117. If the breadth of a rectangle is decreased by 50%, then to double the area, its length is

required to be increased by (a) 150% (b) 200% (c) 300% (d) 400%



[Watch Video Solution](#)

118. If the length and breadth of a rectangular field are increased, the area increases by 50%. If the increase in length was 20%, by what percentage was the breadth increased? (a) 20% (b) 25% (c) 30% (d) Data inadequate (e) None of these



[Watch Video Solution](#)

119. The length of a rectangle is reduced by 20% and breadth is kept constant, and the new figure that is formed is a square. Consider the following statements: The area of square is 25% less than the area of rectangle. The perimeter of square is approximately 11% less than the perimeter of rectangle. The diagonal of square is approximately 12% less than the diagonal of rectangle. Which of the statements given above is/are correct? (a) 1

only (b) 1 and 2 (c) 2 and 3 (d) 1, 2
and 3



Watch Video Solution

120. A typist uses a paper 30 cm by 15 cm. He leaves a margin of 2.5 cm at the top and bottom and 1.25 cm on either side. What percentage of paper area is approximately available for typing? (a) 60% (b) 65% (c) 70% (d) 80%



Watch Video Solution

121. A room $5m \times 8m$ is to be carpeted leaving a margin of 10 cm from each wall. If the cost of the carpet is Rs 18 per Sq. metre, the cost of carpeting the room will be (a) Rs 673.92 (b) Rs 682.46 (c) Rs 691.80 (d) Rs 702.60



Watch Video Solution

122. A lawn is in the shape of a rectangle of 80 m length and 50m width. Outside the lawn there is a footpath of uniform 1m width

bordering the lawn. The area of the footpath is (a) 264m^2 (b) 284m^2 (c) 4000m^2 (d) 4264m^2



Watch Video Solution

123. The breadth of a rectangular field is $\frac{3}{4}$ of its length and its area is 300 sq. metres . What will be the area (in sq. metres) of the garden of breadth 1.5 metres developed around the field? (a) 96 (b) 105 (c) 114 (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

124. What will be the cost of gardening 1 metre broad boundary around a rectangular plot having perimeter of 340 metres at the rate of Rs 10 per square metre? (a) Rs 1700 (b) Rs 3400 (c) Rs 3440 (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

125. 2 metres broad pathway is to be constructed around a rectangular plot on the inside. The area of the plot is 96 sq. m. The rate of construction is Rs 50 per square metre. Find the total cost of the construction. (a) Rs 2400 (b) Rs 4000 (c) Rs 4800 (d) Data inadequate (e) None of these



Watch Video Solution

126. A path of uniform width runs round the inside of a rectangular field 38 m long and 32 m wide. If the path occupies 600 m^2 , then the width of the path is (a) 5 m (b) 10 m
(c) 18.75 m (d) 30 m



Watch Video Solution

127. Within a rectangular garden 10 m wide and 20 m long, we wish to pave a walk around the borders of uniform width so as to leave an

area of 96m^2 for flowers. How wide should the walk be? (a) 1 m (b) 2 m (c) 2.1 m (d) 2.5 m



Watch Video Solution

128. A rectangular garden ($60\text{m} \times 40\text{m}$) is surrounded by a road of width 2 m, the road is covered by tiles and the garden is fenced. If the total expenditure is Rs 51600 and rate of fencing is Rs 50 per metre, then the cost of

covering 1 sq. m of road by tiles is (a) Rs 10 (b) Rs 50 (c) Rs 100 (d) Rs 150



[Watch Video Solution](#)

129. A rectangle lawn $80m \times 60m$ has two roads each with 10 m wide running in the middle of it, one parallel to the length and the other parallel to the breadth. The cost of gravelling them at 30 paise sq. m is



[Watch Video Solution](#)

130. A rectangular field has dimensions 25m by 15m. Two mutually perpendicular passages, 2 m wide have been left in its central part and grass has been grown in rest of the field. The area (in sq. metres) under the grass is (a) 295 (b) 299 (c) 300 (d) 375



Watch Video Solution

131. A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the park and rest of the park has

been used as a lawn. If the area of the lawn is 2109 sq. m, then what is the width of the road?

- (a) 2.91m (b) 3m (c) 5.82m (d) None of these



Watch Video Solution

132. Nine playing cards are set up to form a rectangle as shown in the adjoining figure, If the area of the rectangle so formed is 180 square inches, what is its perimeter?

(FIGURE) (a) 48 inches (b) 56 inches (c) 58 inches (d) 60 inches



Watch Video Solution

133. A garden is 24m long and 14m wide. There is a path 1m wide outside the garden along its sides. If the path is to be constructed with square marble tiles 20cm x 20cm, the number of tiles required to cover the path is



Watch Video Solution

134. The dimensions of a rectangle are 51m and 49m respectively while side of a square is 50m. Which of the following statements is correct? Diagonals of the square and the rectangle are equal. Diagonals of both the geometrical figures intersect at right angles. The perimeters of both the geometrical figures are equal. (d) Both the geometrical figures are of the same area.



Watch Video Solution

135. A housing society has been allotted a square piece of land measuring 2550.25 sq. m.

What is the side of the plot? (a) 50.25 m (b) 50.5 m (c) 50.65 m (d) None of these



Watch Video Solution

136. The area of a square with perimeter 48 cm is (a) 144 sq. cm (b) 156 sq. cm (c) 170 sq. cm (d) 175 sq. cm



Watch Video Solution

137. The length of the side of a square whose area is four times the area of a square with side 25m is (a) 12.5m (b) 50m (c) 100m (d) 125m



Watch Video Solution

138. The area of a square is three-fifths the area of a rectangle. The length of the rectangle is 25cm and its breadth is 10cm less than its length. What is the perimeter of the

square? (a) 44cm (b) 60cm (c) 80cm (d)

Cannot be determined (e) None of these



[Watch Video Solution](#)

139. The area of a square is 1024 sq. cm. What is the ratio of the length to the breadth of a rectangle whose length is twice the side of the square and breadth is 12 cm less than the side of this square? (a) 5:18 (b) 16:7 (c) 14:5 (d) 32:5 (e) None of these



[Watch Video Solution](#)

140. $ABCD$ is a square and $AEFG$ is a rectangle. Area of each of them is 36 sq. m. E is the mid-point of AB . The perimeter of the rectangle $AEFG$ is (a) 12m (b) 18m (c) 30m (d) 36m



Watch Video Solution

141. The cost of cultivating a square field at the rate of Rs 685 per hectare is Rs 6165. The cost of putting a fence around it at the rate of Rs

48.75 per metre would be (a) Rs 23400 (b)

Rs 52650 (c) Rs 58500 (d) Rs 117000



Watch Video Solution

142. The perimeter of a square and a rectangle is the same. If the rectangle is 12 cm by 10 cm, then by what percentage is the area of the square more than that of the rectangle? $\frac{2}{3}$ (b) $1\frac{1}{3}$ (c) $1\frac{1}{6}$ (d) (e) None of these



Watch Video Solution

143. The following squares represent the monthly incomes of two families (FIGURES) If the monthly income of family A is Rs 40000, the monthly income of family B is (a) Rs 50000 (b) Rs 60000 (c) Rs 90000 (d) Rs 120000



Watch Video Solution

144. $ABJH$, $JDEF$, $ACEG$ are squares.

$$\frac{BC}{AB} = 3 \cdot \frac{\text{Area } BCDJ}{\text{Area } HJFG} = ?$$

(a) $\frac{1}{9}$

(b) $\frac{1}{3}$

(c) 1

(d) 3



Watch Video Solution

145. The perimeters of five squares are 24cm, 32cm, 40cm, 76cm and 80cm respectively. The perimeter of another square equal in area to the sum of areas of these squares is



Watch Video Solution

146. A chess board contains 64 equal squares and the area of each square is 6.25 cm^2 . A border round the board is 2 cm wide. Find the length of the side of the chess board.



Watch Video Solution

147. The adjoining figure contains three squares with areas of 100, 16 and 49 lying side by side as shown. By how much should the area of the middle square be reduced in order

that the total length PQ of the resulting three squares is 19? $\sqrt{2}$ (b) 2 (c) 4 (d) 12



[Watch Video Solution](#)

148. A coaching institute wants to execute tiling work for one of its teaching halls 60m long and 40m wide with a square tile of 0.4 m side. If earth tile costs Rs 5, the total cost of tiles would be (a) Rs 60000 (b) Rs 65000 (c) Rs 70000 (d) Rs 75000



[Watch Video Solution](#)

149. The number of marble slabs of size $20\text{cm} \times 30\text{cm}$ required to pave the floor of a square room of side 3 metres is (a) 100 (b) 150 (c) 225 (d) 250



Watch Video Solution

150. 50 square stone slabs of equal size were needed to cover a floor area of 72 sq. m. The length of each stone slab is (a) 102cm (b) 120cm (c) 201cm (d) 210cm



[Watch Video Solution](#)

151. How many squares with side $\frac{1}{2}$ inch long are needed to cover a rectangle that is 4 feet long and 6 feet wide? (a) 24 (b) 96 (c) 3456 (d) 13824 (e) 14266



[Watch Video Solution](#)

152. The length and breadth of the floor of the room are 20 feet and 10 feet respectively.

Square tiles of 2 feet length of different colours are to be laid on the floor. Black tiles are laid in the first row on all sides. If white tiles are laid in the one-third of the remaining and blue tiles in the rest, how many blue tiles will be there? (a) 16 (b) 24 (c) 32 (d) 48 (e) None of these



Watch Video Solution

153. A big rectangular plot of area 4320m^2 is divided into 3 square-shaped smaller plots by

fencing parallel to the smaller side of the plot.

However some area of land was still left as a square could not be formed. So, 3 more square-shaped plots were formed by fencing parallel to the longer side of the original plot such that no area of the plot was left surplus.

What are the dimensions of the original plot?

$160m \times 27m$ (b) $240m \times 18m$ (c)

$120m \times 36m$ (d) $135m \times 32m$



Watch Video Solution

154. Three plots having areas 110, 130 and 190 square metres are to be subdivided into flower beds of equal size. If the breadth of a bed is 2 metre, the maximum length of a bed can be (a) 5m (b) 11m (c) 13m (d) 19m



Watch Video Solution

155. A room is $12\frac{1}{4}m$ long and 7m wide. The maximum length of a square tile to fill the floor of the room with whole number of tiles

should be (a) 125cm (b) 150cm (c) 175cm (d)
200cm



[Watch Video Solution](#)

156. What is the minimum number of identical square tiles required to tile a floor of length 6m 24cm and width 4m 80cm? (a) 122 (b) 130 (c) 148 (d) 165 (e) None of these



[Watch Video Solution](#)

157. A rectangular room can be partitioned into two equal square rooms by a partition 7 metres long. What is the area of the rectangular room in square metres? (a) 49 (b) 147 (c) 196 (d) None of these



Watch Video Solution

158. Perimeter of a rectangular field is 160 metres and the difference between its two adjacent sides is 48 metres. The side of a

square field, having the same area as that of the rectangle, is (a) 4m (b) 8m (c) 16m (d) 32m



Watch Video Solution

159. The area of the shaded portion is (FIGURE) (a) 10 sq. cm (b) 14 sq. cm (c) 21 sq. cm (d) 25 sq. cm



Watch Video Solution

160. The perimeter of a square is 48 cm. The area of a rectangle is 4cm^2 less than the area of the square. If the length of the rectangle is 14 cm, then its perimeter is

- (a) 24cm
- (b) 48 cm
- (c) 50 cm
- (d) 54cm



Watch Video Solution

161. The area of a rectangle is thrice that of a square. If the length of the rectangle is 40cm and its breadth is $\frac{3}{2}$ times that of the side of the square, then the side of the square is (a) 15cm (b) 20cm (c) 30cm (d) 60cm



Watch Video Solution

162. The perimeter of a rectangle and a square are 160 m each. The area of the rectangle is less than that of the square by 100 sq. m. The

length of the rectangle is (a) 30m (b) 40m (c) 50m (d) 60m



[Watch Video Solution](#)

163. The area of a rectangle is four times the area of a square. The length of the rectangle is 90cm and the breadth of the rectangle is $\frac{2}{3}$ rd the side of the square. What is the side of the square? (a) 9cm (b) 10cm (c) 20cm (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

164. The cost of fencing a square field @ Rs 20 per metre is Rs 10,080. How much will it cost to lay a three metre wide pavement along the fencing inside the field @ Rs 50 per sq. metre?

- (a) Rs 37,350 (b) Rs 73,800 (c) Rs 77,400
(d) None of these



Watch Video Solution

165. A park square in shape has a 3 metre wide road inside it running along its sides. The area

occupied by the road is 1764 square metres.

What is the perimeter along the outer edge of the road? (a) 576 metres (b) 600 metres (c) 640 metres (d) Data inadequate (e) None of these



Watch Video Solution

166. A man walked diagonally across a square lot. Approximately, what was the percent saved by not walking along the edges? (a) 20 (b) 24 (c) 30 (d) 33



Watch Video Solution

167. If the length of diagonal AC of a square $ABCD$ is 5.2cm, then the area of the square is
(a) 10.52sq. cm (b) 11.52sq. cm (c) 12.52sq. cm
(d) 13.52sq. cm



Watch Video Solution

168. A man walking at the speed of 4 kmph crosses a square field diagonally in 3 minutes.

The area of the field is (a) 18000m^2 (b) 19000m^2 (c) 20000m^2 (d) 25000m^2



Watch Video Solution

169. If the length of the diagonal of a square is 20 cm, then its perimeter must be $10\sqrt{2}\text{cm}$ (b) 40cm (c) $40\sqrt{2}\text{cm}$ (d) 200 cm



Watch Video Solution

170. The area of a square field is 69696cm^2 . Its diagonal will be equal to (a) 313.296m (b) 353.296m (c) 373.296m (d) 393.296m



Watch Video Solution

171. What will be the length of the diagonal of that square plot whose area is equal to the area of a rectangular plot of length 45 metres and breadth 40 metres? (a) 42.5 metres (b)

60 metres

(c) 75 metres (d) Data

inadequate

(e) None of these



Watch Video Solution

172. The area of a square field is 0.5 hectare. Its diagonal would be (a) 50m (b) $50\sqrt{2}m$ (c) 100m (d) 250m



Watch Video Solution

173. Area of a square natural lake is 50 sq. kms.

A diver wishing to cross the lake diagonally,

will have to swim a distance of (a) 10 miles

(b) 12 miles (c) 15 miles (d) None of these



Watch Video Solution

174. The length of a rectangle is 20% more

than its breadth. What will be the ratio of the

area of a rectangle to that of a square whose

side is equal to the breadth of the rectangle?

- (a) 2 : 1 (b) 5 : 6 (c) 6 : 5 (d) Data
inadequate (e) None of these



Watch Video Solution

175. A square and a rectangle have equal areas.

If their perimeters are p_1 and p_2 respectively,

then (a) $p_1 < p_2$ (b) $p_1 = p_2$ (c) $p_1 > p_2$ (d)

None of these



Watch Video Solution

176. If the perimeters of a square and a rectangle are the same, then the areas A and B enclosed by them would satisfy the condition (a) $A < B$ (b) $A \leq B$ (c) $A > B$ (d) $A \geq B$



Watch Video Solution

177. The diagonal of a square is $4\sqrt{2}$ cm. The diagonal of another square whose area is

double that of the first square, is (a) 8 cm (b)

$8\sqrt{2}cm$ (c) $4\sqrt{2}cm$ (d) 16cm



Watch Video Solution

178. The area of a square and that of a square drawn on its diagonal are in the ratio $1:\sqrt{2}$

(b) $1:2$ (c) $1:3$ (d) $1:4$



Watch Video Solution

179. A square S_1 encloses another square S_2 in such a manner that each corner of S_2 is at the mid-point of the side of S_1 . If A_1 is the area of S_1 and A_2 is the area of S_2 , then $A_1 = 4 A_2$
(b) $A_1 = 2 A_2$ (c) $A_2 = 2 A_1$ (d) $A_1 = A_2$



Watch Video Solution

180. If a square of area $\frac{A}{2}$ is cut off from a given square of area A , then the ratio of diagonal of the cut off square to that of the

given square is (a) $1:5$ (b) $1:2\sqrt{5}$ (c) $1:\sqrt{5}$ (d)

$1:\sqrt{2}$



[Watch Video Solution](#)

181. The ratio of the areas of two squares, one having its diagonal double than the other, is

$1:2$ (b) $2:3$ (c) $3:1$ (d) $4:1$



[Watch Video Solution](#)

182. If the ratio of areas of two squares is 225:256, then the ratio of their perimeters is 225:256 (b) 256:225 (c) 15:16 (d) 16:15



Watch Video Solution

183. Of the two square fields, the area of one is 1 hectare while the other one is broader by 1%. The difference in their areas is (a) 100 m² (b) 101 m² (c) 200 m² (d) 201 m²



Watch Video Solution

184. If each side of a square is increased by 10%, its area will be increased by (a) 10%
(b) 21% (c) 44% (d) 100%



Watch Video Solution

185. If each side of a square is increased by 50%, the ratio of the area of the resulting square to that of the given square is (a) 4 : 5
(b) 5 : 4 (c) 4 : 9 (d) 9 : 4



Watch Video Solution

186. If the side of a square are halved, then its area (a) remains same (b) becomes half (c) becomes one fourth (d) becomes double



Watch Video Solution

187. If the sides of a square be doubled find the increase of percentage in area. (a)

100%

(b) 200%

(c) 300%

(d)

400%



Watch Video Solution

188. An error of 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is (a) 2% (b) 2.02% (c) 4% (d) 4.04%



Watch Video Solution

189. If the area of a square increases by 69%, then the side of the square increases by (a) 13% (b) 30% (c) 39% (d) 69%



Watch Video Solution

190. If the diagonal of a square is made 1.5 times, then the ratio of the areas of two squares is (a) 4 : 3 (b) 4 : 5 (c) 4 : 7 (d) 4 : 9



Watch Video Solution

191. The length and breadth of a square are increased by 40% and 30% respectively. The area of the resulting rectangle exceeds the area of the square by (a) 35% (b) 42% (c) 62% (d) 82%



Watch Video Solution

192. The length of one pair of opposite sides of a square is increased by 5 cm on each side; the ratio of the length and the breadth of the

newly formed rectangle becomes 3 : 2. What is the area of the original square? (a) 25 sq. cm
(b) 81 sq. cm (c) 100 sq. cm (d) 225 sq. cm
(e) None of these



Watch Video Solution

193. If the length of a certain rectangle is decreased by 4 cm and the width is increased by 3 cm, a square with the same area as the original rectangle would result. The perimeter

of the original rectangle (in cm) is (a) 44

(b) 46 (c) 48 (d) 50



Watch Video Solution

194. A rectangle becomes a square when its length is reduced by 10 units and its breadth is increased by 5 units. But by this process the area of the rectangle is reduced by 210 sq. units. The area of the rectangle

$2950 > A < 2900$ (b) $2900 > A > 2875$ (c) $2925 < A < 2875$ (d) $2925 > A > 2900$



[Watch Video Solution](#)

195. If the side of a square is increased by 5 cm, the area increases by 165 sq. cm. The side of the square is (a) 12 cm (b) 13 cm (c) 14 cm
(d) 15 cm



[Watch Video Solution](#)

196. The difference of the areas of two squares drawn on two line segments of different lengths is 32 sq. cm. Find the length of the

greater line segment if one is longer than the other by 2 cm. (a) 7 cm (b) 9 cm (c) 11 cm (d) 16 cm



Watch Video Solution

197. The areas of a square and a rectangle are equal. The length of the rectangle is greater than the length of any side of the square by 5 cm and the breadth is less by 3 cm. Find the perimeter of the rectangle. (a) 17 cm (b) 26 cm (c) 30 cm (d) 34 cm

[Watch Video Solution](#)

198. The area of a square is twice that of a rectangle. The perimeter of the rectangle is 10 cm. If its length and breadth each is increased by 1 cm, the area of the rectangle becomes equal to the area of the square. The length of side of the square is $2\sqrt{3}cm$ (b) $3\sqrt{2}cm$ (c) $4\sqrt{3}cm$ (d) 12 cm

[Watch Video Solution](#)

199. Twenty-nine times the area of a square is one square metre less than six times the area of the second square and nine times its side exceeds the perimeter of other square by 1 metre. The difference in the sides of these squares is (a) 5m (b) $\frac{54}{11}m$ (c) 6m (d) 11m



Watch Video Solution

200. A rectangular plank $\sqrt{2}$ metre wide is placed symmetrically on the diagonal of a

square of side 8 metres as shown in the figure.

The area of the plank is $7\sqrt{2}$ sqm (b) 14 sqm

(c) 98 sq. m (d) $(16\sqrt{2} - 3)$ sqm



Watch Video Solution

201. What will be the area of 4 metre high wall on all four sides of a rectangular hall having perimeter 64 m? (a) 256m² (b) 328m² (c) 384m² (d) Cannot be determined (e) None of these



Watch Video Solution

202. The area of the four walls of a room is 120m^2 and the length is twice the breadth. If the height of the room is 4m , then the area of the floor is (a) 48m^2 (b) 49m^2 (c) 50m^2 (d) 52m^2



Watch Video Solution

203. A tank is 25 m long, 12 m wide and 6 m deep. The cost of plastering the walls and

bottom at 75 paise per sq. m, is (a) Rs 456 (b)
Rs 458 (c) Rs 558 (d) Rs 568



Watch Video Solution

204. The length of a room is double its breadth. The cost of colouring the ceiling at Rs 25 per sq. m is Rs 5000 and the cost of painting the four walls at Rs 240 per sq. m is Rs 64800. Find the height of the room. (a) 3.5m (b) 4m (c) 4.5m (d) 5m



Watch Video Solution

205. The dimensions of a room are 12.5 m by 9m by 7m. There are 2 doors and 4 windows in the room; each door measures 2.5 m by 1.2 m and each window 1.5m by 1 m. Find the cost of painting the walls at Rs. 3.50 per square metre.



Watch Video Solution

206. A hall, whose length is 16m and the breadth is twice its height, takes 168m of paper with 2m as its width to cover its four

walls. The area of the floor is (a) 96m^2 (b) 190m^2 (c) 192m^2 (d) 216m^2



Watch Video Solution

207. The cost of papering the four walls of a room is Rs 475. Each one of the length, breadth and height of another room is double that of this room. The cost of papering the walls of this new room is (a) Rs 712.50 (b) Rs 950 (c) Rs 1425 (d) Rs 1900



Watch Video Solution

208. The ratio of the height of a room to its semi-perimeter is 2 : 5. It costs Rs 260 to paper the walls of the room with paper 50 cm wide at Rs 2 per metre allowing an area of 15 sq. m for doors and windows. The height of the room is (a) 2.6m (b) 3.9m (c) 4m (d) 4.2m



Watch Video Solution

209. The length, breadth and height of the room are in the ratio 3:2:1. The breadth and height of the room are halved and length of the room is doubled. The area of the four walls of the room will (a) decrease by 13.64% (b) decrease by 15% (c) decrease by 18.75% (d) decrease by 30%



Watch Video Solution

210. Consider the following: (FIGURE)

Which one of the following conclusions can be drawn from these figures? The areas of the three figures are all different. The areas of all the three figures are equal. The perimeters of the three figures are equal. (d) The perimeters of figures I and II are equal.



Watch Video Solution

211. The base of a triangle is 15cm and height is 12cm. The height of another triangle of double the area having the base 20cm is (a) 8cm (b) 9cm (c) 12.5cm (d) 18cm



Watch Video Solution

212. The area of a right-angled triangle is 40 times its base. What is its height? (a) 45cm (b) 60cm (c) 80cm (d) Data inadequate (e) None of these



[Watch Video Solution](#)

213. The area of a triangle is p sq cm and its base is x cm. What is the height of the triangle (in cm)? (a) $\frac{2p}{x}$ (b) $\frac{x}{2p}$ (c) $\frac{p}{2x}$ (d) $\frac{2x}{p}$

[Watch Video Solution](#)

214. Each side of an equilateral triangle is 8 cm. Its area is (a) $16\sqrt{3} \text{ cm}^2$ (b) $32\sqrt{3} \text{ cm}^2$ (c) $24\sqrt{3} \text{ cm}^2$ (d) $8\sqrt{3} \text{ cm}^2$

[Watch Video Solution](#)

215. The ratio of the area of a square of side a and that of an equilateral triangle of side a , is
2:1 (b) $2:\sqrt{3}$ 4:3 (d) $4:\sqrt{3}$



Watch Video Solution

216. $ABCD$ is a rectangle and ABE is a triangle whose vertex E lies on CD . If $AB = 5\text{cm}$ and the area of the triangle is 10

sq. cm, then the perimeter of the rectangle is

(a) 14 cm (b) 15 cm (c) 18 cm (d) 20 cm



Watch Video Solution

217. The area of a triangle is equal to that of a square whose each side measures 60 metres. Find the side of the triangle whose corresponding altitude is 90 metres.



Watch Video Solution

218. What is the area of the given figure?

(FIGURE) (a) 98.8 cm^2 (b) 110.4 cm^2 (c) 120 cm^2 (d) 132.6 cm^2



Watch Video Solution

219. In $\triangle PQR$, side $PQ = 32\text{cm}$ and side $PR = 25\text{cm}$. What is the measure of side QR

? (a) $4\sqrt{154}\text{cm}$ (b) $2\sqrt{308}\text{cm}$ (c) $4\sqrt{308}\text{cm}$ (d)

Cannot be determined (e) None of these



Watch Video Solution

220. What is the area of $\triangle PQR$, shown in Fig.?
(a) $2\sqrt{154}$ sq. cm (b) $3\sqrt{154}$ sq. cm (c) $4\sqrt{308}$ sq. cm
(d) Cannot be determined (e) None of these



Watch Video Solution

221. Out of a square of side 8 cm, a triangle is drawn with base as one side of the square and third vertex at any point on the opposite side of the square. What is the area of the

remaining portion of the square if the triangle is taken out? (a) 16 sq. cm (b) 32 sq. cm (c) 64 sq. cm (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

222. Consider the given figure (FIGURE) If the areas of the triangles LDC , BMC and AMC are denoted by x , y and z respectively, then
 $x = y = z$ (b) $x = 2y = 2z$ (c) $y = 2x = 2z$
(d) $z = 2x = 2y$



[Watch Video Solution](#)

223. If the area of a triangle is 1176 cm^2 and base : corresponding altitude is $3 : 4$, then the altitude of the triangle is (a) 42 cm (b) 52 cm (c) 54 cm (d) 56 cm



[Watch Video Solution](#)

224. The area of a triangle whose sides are of lengths 3 cm, 4 cm and 5 cm is (a) 8 cm^2 (b) 6 cm^2 (c) 10 cm^2 (d) None of these



[Watch Video Solution](#)

225. The three sides of a triangular field are 20 metres, 21 metres and 29 metres long respectively. The area of the field is (a) 210 sq. m (b) 215 sq. m (c) 230 sq. m (d) None of these



[Watch Video Solution](#)

226. The perimeter of an isosceles triangle is equal to 14 cm and the lateral side is to the base in the ratio 5 : 4. The area of the triangle is (a) 21 cm² (b) $0.5\sqrt{21}cm^2$ (c) $1.5\sqrt{21}cm^2$ (d) $2\sqrt{21}cm^2$



Watch Video Solution

227. The sides of a triangle are in the ratio of $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$. If the perimeter is 52 cm, then the

length of the smallest side is (a) 9cm (b) 10cm
(c) 11cm (d) 12cm



Watch Video Solution

228. The sides of a triangle are consecutive integers. The perimeter of the triangle is 120 cm. Find the length of the greatest side. (a) 39cm (b) 40cm (c) 41cm (d) 42cm



Watch Video Solution

229. The area of a triangle is 216 cm^2 and its sides are in the ratio 3:4:5. The perimeter of the triangle is (a) 6cm (b) 12cm (c) 36cm (d) 72cm



Watch Video Solution

230. If three sides of a triangle are 6 cm, 8 cm and 10 cm, then the altitude of the triangle, using the largest side as its base, will be (a) 4.4 cm (b) 4.8 cm (c) 6 cm (d) 8 cm



[Watch Video Solution](#)

231. The sides of a triangle are 3 cm, 4 cm and 5 cm. The area (in cm²) of the triangle formed by joining the mid-points of the sides of this triangle is $\frac{3}{4}$ (b) $\frac{3}{2}$ (c) 3 (d) 6

[Watch Video Solution](#)

232. If D , E and F are the mid-points of the sides of a $\triangle ABC$, the ratio of the areas of

the triangles DEF and DCE is (a) 1.1:1 (b) 1:1.1
(c) 1:1 (d) 0.9:1



Watch Video Solution

233. The sides of a triangle are 5 cm, 6 cm, and 7 cm. One more triangle is formed by joining the mid-points of the sides. The perimeter of the second triangle in cm is (a) 6 (b) 9
(c) 12 (d) 18 (e) None of these



Watch Video Solution

234. In a triangle ABC , a line XY is drawn parallel to BC meeting AB in X and AC in Y . The area of the triangle AXY is half of the area of the triangle ABC . XY divides AB in the ratio of $1 : \sqrt{2}$ (b) $\sqrt{2} : (\sqrt{2} - 1)$ (c) $1 : (\sqrt{2} - 1)$ (d) $\sqrt{2} : \sqrt{3}$



Watch Video Solution

235. The areas of two similar triangles are 12 cm² and 48 cm². If the height of the smaller one is 2.1 cm, then the corresponding height

of the bigger one is (a) 0.525 cm (b) 4.2 cm
(c) 4.41 cm (d) 8.4 cm



Watch Video Solution

236. A triangle of area $9y \text{ cm}^2$ has been drawn such that its area is equal to the area of an equilateral triangle of side 6 cm. The value of y would be $\sqrt{2}$ (b) $\sqrt{3}$ (c) 2 (d) 3



Watch Video Solution

237. The hypotenuse of a right-angled isosceles triangle is 5 cm. The area of the triangle is (a) 5 cm² (b) 6.25 cm² (c) 6.5 cm² (d) 12.5 cm²



Watch Video Solution

238. One side of a right-angled triangle is twice the other, and the hypotenuse is 10 cm. The area of the triangle is (a) 20 cm² (b) $33\frac{1}{3} \text{ cm}^2$ (c) 40 cm² (d) 50 cm²



[Watch Video Solution](#)

239. The area of a right-angled triangle is 20 sq. cm and one of the sides containing the right angle is 4 cm. The altitude on the hypotenuse is $\frac{41}{\sqrt{34}} cm$ (b) $\sqrt{\frac{41}{40}} cm$ (c) $\frac{29}{\sqrt{20}} cm$ (d) $\frac{20}{\sqrt{29}} cm$

[Watch Video Solution](#)

240. The base and altitude of right-angled triangle are 12 cm and 5 cm respectively. The

perpendicular distance of its hypotenuse from the opposite vertex is $4\frac{4}{13} \text{ cm}$ (b) $4\frac{8}{13} \text{ cm}$ (c) 5 cm (d) 7 cm



Watch Video Solution

241. If the hypotenuse of a right-angled triangle is 41 cm and the area of the triangle is 180 sq. cm, then the difference between the lengths of the legs of the triangle must be (a) 22 cm (b) 25 cm (c) 27 cm (d) 31 cm



Watch Video Solution

242. The perimeter of a right-angled triangle is 60 cm. Its hypotenuse is 26 cm. The area of the triangle is 120 cm^2 (b) 240 cm^2 (c) 390 cm^2 (d) 780 cm^2



Watch Video Solution

243. If the perimeter of a right-angled isosceles triangle is $(4\sqrt{2} + 4) \text{ cm}$, the length of the hypotenuse is (a) 4 cm (b) 6 cm (c) 8 cm (d) 10 cm



[Watch Video Solution](#)

244. If the perimeter of an isosceles right triangle is $(6 + 3\sqrt{2})m$, then the area of the triangle is $4.5 m^2$ (b) $5.4 m^2$ (c) $9 m^2$ (d) $81 m^2$



[Watch Video Solution](#)

245. The perimeter of an isosceles right-angled triangle having an area of $162cm^2$ is (a) 40

cm (b) 56.5 cm (c) 61.38 cm (d) 68.2 cm



Watch Video Solution

246. In an isosceles triangle, the measure of each of the equal sides is 10 cm and the angle between them is 45° . The area of the triangle is 25 cm^2 (b) $\frac{25}{2}\sqrt{2} \text{ cm}^2$ (c) $25\sqrt{2} \text{ cm}^2$ (d) $25\sqrt{3} \text{ cm}^2$



Watch Video Solution

247. The perimeter of a triangle is 30 cm and its area is 30 cm^2 . If the largest side measures 13 cm, then what is the length of the smallest side of the triangle? (a) 3 cm (b) 4 cm (c) 5 cm (d) 6 cm



Watch Video Solution

248. If the area of an equilateral triangle is $24\sqrt{3} \text{ sq cm}$, then its perimeter is $2\sqrt{6} \text{ cm}$ (b) $4\sqrt{6} \text{ cm}$ (c) $12\sqrt{6} \text{ cm}$ (d) 96 cm



[Watch Video Solution](#)

249. The altitude of an equilateral triangle of side $2\sqrt{3} \text{ cm}$ is $\frac{1}{2} \text{ cm}$ (b) $\frac{\sqrt{3}}{4} \text{ cm}$ (c) $\frac{\sqrt{3}}{2} \text{ cm}$ (d) 3 cm

[Watch Video Solution](#)

250. The height of an equilateral triangle is 10 cm. Its area is (a) $\frac{100}{3} \text{ cm}^2$ (b) 30 cm^2 (c) 100 cm^2 (d) $\frac{100}{\sqrt{3}} \text{ cm}^2$

[Watch Video Solution](#)

251. The areas of two equilateral triangles are in the ratio 25:36. Their altitudes will be in the ratio (a) 25:36 (b) 36:25 (c) 5:6 (d) $\sqrt{5} : \sqrt{6}$



Watch Video Solution

252. From a point within an equilateral triangle, perpendiculars drawn to the three sides are 6 cm, 7 cm, and 8 cm respectively. The

length of the side of the triangle is (a) 7 cm (b)

10.5 cm (c) $14\sqrt{3} \text{ cm}$ (d) $\frac{14\sqrt{3}}{3} \text{ cm}$



Watch Video Solution

253. If x is the length of a median of an equilateral triangle, then its area is (a) x^2 (b)

$\frac{1}{2}x^2$ (c) $\frac{\sqrt{3}}{2}x^2$ (d) $\frac{\sqrt{3}}{3}x^2$



Watch Video Solution

254. $ABCD$ is a square. E is the mid-point of BC and F is the mid-point of CD . The ratio of the area of triangle AEF to the area of the square $ABCD$ is (a) $1 : 2$ (b) $1 : 3$ (c) $1 : 4$ (d) $3 :$

8



Watch Video Solution

255. If the area of a square with side a is equal to the area of a triangle with base a , then the altitude of the triangle is $\frac{a}{2}$ (b) a (c) $2a$ (d) $4a$



[Watch Video Solution](#)

256. An equilateral triangle is described on the diagonal of a square. What is the ratio of the area of the triangle to that of the square?

2 : $\sqrt{3}$ (b) $4 : \sqrt{3}$ (c) $\sqrt{3} : 2$ (d) $\sqrt{3} : 4$

[Watch Video Solution](#)

257. What will be the ratio between the area of a rectangle and the area of a triangle with one of the sides of the rectangle as base and a

vertex on the opposite side of the rectangle?

- (a) 1 : 2 (b) 2 : 1 (c) 3 : 1 (d) Data inadequate
(e) None of these



Watch Video Solution

258. If an equilateral triangle of area X and a square of area Y have the same perimeter, then X is equal to Y (b) greater than Y (c) less than Y (d) less than or equal to Y



Watch Video Solution

259. A square and an equilateral triangle have equal perimeters. If the diagonal of the square is $12\sqrt{2} \text{ cm}$, then area of the triangle is:
 $24\sqrt{2} \text{ cm}^2$ (b) $24\sqrt{3} \text{ cm}^2$ $48\sqrt{3} \text{ cm}^2$ (d)
 $64\sqrt{3} \text{ cm}^2$



Watch Video Solution

260. The ratio of bases of two triangles is $x : y$ and that of their areas is $a : b$. Then the ratio of their corresponding altitudes will be (a)
 $ax : by$ (b) $\frac{a}{x} : \frac{b}{y}$ (c) $ay : bx$ (d) $\frac{x}{a} : \frac{b}{y}$



[Watch Video Solution](#)

261. If the sides of a triangle be in the ratio $2 : 3 : 4$, the ratio of the corresponding altitudes is (a) $6 : 5 : 3$ (b) $4 : 5 : 6$ (c) $5 : 4 : 3$ (d) $6 : 4 : 3$



[Watch Video Solution](#)

262. If the side of an equilateral triangle is decreased by 20% , its area is decreased by (a)

36% (b) 40% (c) 60% (d) 64%



Watch Video Solution

263. If the height of a triangle is decreased by 40% and its base is increased by 40%, what will be the effect on its area? (a) No change (b) 8% decrease (c) 16% increase
(d) 16% decrease



Watch Video Solution

264. If every side of a triangle is doubled, then increase in the area of the triangle is $100\sqrt{2} \%$ (b) 200% (c) 300% (d) 400%



Watch Video Solution

265. Two isosceles triangles have equal vertical angles and their corresponding sides are in the ratio 3:5. What is the ratio of their areas?

(a) 3:5

(b) 6:10

(c) 9:25

(d) None of these



Watch Video Solution

266. If an angle of a triangle remains unchanged but each of its two including sides is doubled, then by what factor does the area get multiplied? (a) 2 (b) 3 (c) 4
(d) 6



Watch Video Solution

267. In the given figure, $ABCD$ is a rectangle with $AD = 4$ units and $AE = EF$ is perpendicular to DB and is half of DF . If the area of the triangle DEF is 5 sq. units, then what is the area of $ABCD$? $18\sqrt{3}$ sq. units
(b) 20 sq. units (c) 24 sq. units (d) 28 sq. units



Watch Video Solution

268. Four equilateral triangles are described on the four sides of a rectangle with perimeter 12 cm. If the sum of the areas of the four

triangles is $10\sqrt{3} \text{ cm}^2$, what is the area of the rectangle? (a) 5 cm^2 (b) 8 cm^2 (c) 9 cm^2 (d) 6.75 cm^2



Watch Video Solution

269. The dimensions of the field shown in the given figure are $AC = 150 \text{ m}$, $AH = 120 \text{ m}$,

(b) $AG = 80 \text{ m}$, $AF = 50 \text{ m}$, (c)

$EF = 30 \text{ m}$, $GB = 50 \text{ m}$, (d) $HD = 20 \text{ cm}$

The area of this field is (a) 6500 m^2 (b) 6550 m^2 (c) 6600 m^2 (d) 6650 m^2



Watch Video Solution

270. The readings in a field book are: (FIGURE)

It is subsequently realised that the distances to C and D had been interchanged by mistake. The area of the actual field would be
(a) 1300 sq. m (b) 1500 sq. m (c) 1800 sq. m (d) 2000 sq. m



Watch Video Solution

271. The measurements of a field are as shown:

(FIGURE) If the total area of the field is 27500

sq. m, then the value of x is equal to (a) 25 m

(b) 30 m (c) 50 m (d) 75 m



Watch Video Solution

272. A field in the form of a parallelogram has

one side 150 metres and its distance from the

opposite side is 80 metres. The cost of

watering the field at the rate of 50 paise per

square metre is (a) Rs 3500 (b) Rs 5000

(c) Rs 6000 (d) Rs 7000



Watch Video Solution

273. Let $ABCD$ be a parallelogram and $ABEF$ be a rectangle with EF lying along the line CD . If $AB = 7cm$ and $BE = 6.5cm$, then the area of the parallelogram is

11. $375cm^2$ (b) $22.75cm^2$ (c) $45cm^2$ (d) $45.5cm^2$



Watch Video Solution

274. A rectangle and a parallelogram are drawn between the same parallel lines on a common base of 10 cm. If the perimeter of the rectangle is 36 cm, then the area of the parallelogram is 60cm^2 (b) 80cm^2 (c) 81cm^2 (d) 100cm^2



Watch Video Solution

275. A rectangle and a parallelogram have equal areas. If the sides of the rectangle are 10

m and 12 m and the base of the parallelogram is 20 m, then the altitude of the parallelogram is (a) 3 m (b) 5 m (c) 6 m (d) 7 m



Watch Video Solution

276. A parallelogram has sides 30m and 14m and one of its diagonals is 40 m long. Then, its area is $168 m^2$ (b) $336 m^2$ (c) $372 m^2$ (d) $480 m^2$



Watch Video Solution

277. One diagonal of a parallelogram is 70 cm and the perpendicular distance of this diagonal from either of the outlying vertices is 27 cm. The area of the parallelogram (in sq. cm) is (a) 1800 (b) 1836 (c) 1890 (d) 1980



Watch Video Solution

278. A triangle and a parallelogram are constructed on the same base such that their areas are equal. If the altitude of the parallelogram is 100m, then the altitude of the

triangle is $10\sqrt{2}m$ (b) $100m$ (c) $100\sqrt{2}m$ (d)
 $200m$



[Watch Video Solution](#)

279. Two equilateral triangles of side $2\sqrt{3} \text{ cm}$ are joined to form a quadrilateral. The altitude of the quadrilateral, thus formed, is equal to
(a) 3 cm (b) 4 cm (c) 6 cm (d) 8 cm



[Watch Video Solution](#)

280. If a parallelogram with area P , a rectangle with area R and a triangle with area T are all constructed on the same base and all have the same altitude, then which of the following statements is false? (a) $P = R$ (b) $P + T = 2R$ (c) $P = 2T$ (d) $T = \frac{1}{2}R$



Watch Video Solution

281. The area of a rhombus is 150 cm^2 . The length of one of its diagonals is 10 cm . The

length of the other diagonal is (a) 25 cm (b)
30 cm (c) 35 cm (d) 40 cm



Watch Video Solution

282. One of the diagonals of a rhombus is double the other diagonals. Its area is 25 sq. cm. The sum of the diagonals is (a) 10 cm
(b) 12 cm (c) 15 cm (d) 16 cm



Watch Video Solution

283. The perimeter of a rhombus is 56 cm and its height is 5 m. Its area is (a) 64 sq. m (b) 70 sq. m (c) 78 sq. m (d) 84 sq. m



Watch Video Solution

284. If a diagonals of a rhombus are 24 cm and 10 cm, the area and the perimeter of the rhombus are respectively (a) 120 cm², 52 cm (b) 120 cm², 64 cm (c) 240 cm², 52 cm (d) 240 cm², 64 cm



[Watch Video Solution](#)

285. Each side of a rhombus is 26 cm and one of its diagonals is 48 cm long. The area of the rhombus is (a) 2400 cm² (b) 3000 cm² (c) 3600 cm² (d) 4800 cm²

[Watch Video Solution](#)

286. A diagonal of a rhombus is 6 cm. If its area is 24 cm² then the length of each side of the

rhombus is (a) 5 cm (b) 6 cm (c) 7 cm
(d) 8 cm



Watch Video Solution

287. If each side of a rhombus is 20 metres and its shorter diagonal is three-fourths of its longer diagonal, then the area of this rhombus must be (a) 375 sq. m (b) 380 sq. m
(c) 384 sq. m (d) 395 sq. m



Watch Video Solution

288. The length of one diagonal of a rhombus is 80% of the other diagonal. The area of the rhombus is how many times the square of the length of the other diagonal? $\frac{4}{5}$ (b) $\frac{2}{5}$ (c) $\frac{3}{4}$
(d) $\frac{1}{4}$



Watch Video Solution

289. If a square and a rhombus stand on the same base, then the ratio of the areas of the square and the rhombus is (a) greater than 1
(b) equal to 1 (c) equal to $\frac{1}{2}$ (d) equal to $\frac{1}{4}$



[Watch Video Solution](#)

290. The two parallel sides of a trapezium are 1.5 m and 2.5 m respectively. If the perpendicular distance between them is 6.5 metres, the area of the trapezium is (a) 10 m² (b) 13 m² (c) 20 m² (d) 26 m²



[Watch Video Solution](#)

291. If the area of the trapezium whose parallel sides are 6 cm and 10 cm is 32 sq. cm, then the distance between the parallel sides is (a) 2 cm (b) 4 cm (c) 5 cm (d) 8 cm



Watch Video Solution

292. The distance between the parallel sides of a trapezium = The distance between the mid-points of the slant sides = 4 cm. What is the

area of the trapezium? (a) 4 cm^2 (b) 8 cm^2
(c) 16 cm^2 (d) 20 cm^2



[Watch Video Solution](#)

293. $ABCD$ is a rectangle and E and F are the mid-points of AD and DC respectively. Then the ratio of the areas of EDF and $AEFC$ would be (a) $1 : 2$ (b) $1 : 3$ (c) $1 : 4$ (d) $2 : 3$



[Watch Video Solution](#)

294. The area of a field in the shape of a trapezium measures 1440 m^2 . The perpendicular distance between its parallel sides is 24 m . If the ratio of the parallel sides is $5 : 3$, the length of the longer parallel side is

(a) 45 m (b) 60 m (c) 75 m (d) 120 m



Watch Video Solution

295. The cross-section of a canal is trapezium in shape. The canal is 12 m wide at the top and

8 m wide at the bottom. If the area of the cross-section is 840 sq. m, the depth of the canal is (a) 8.75 m (b) 42 m (c) 63 m (d) 84 m



Watch Video Solution

296. Which two figure have an equal area?
(FIGURES) A and B (b) B and D (c) A and C
(d) A and D



Watch Video Solution

297. Which of the following figures has the longest perimeter? (a) A square of side 10cm (b) A rectangle of sides 12cm and 9cm (c) A circle of radius 7 cm (d) A rhombus of side 9 cm



Watch Video Solution

298. Which one of the following has a greater perimeter than the rest? A square with an area of 36 sq. cm An equilateral triangle with a side of 9 cm A rectangle with 10 cm as length and

40 sq. cm as area (d) A circle with a radius of 4 cm



Watch Video Solution

299. The diameter of a circle is 3.5 cm. What is the circumference of the circle? (a) 11 cm
(b) 22 cm (c) 38.5 cm (d) 45.2 cm
(e) None of these



Watch Video Solution

300. Area of a rectangle is equal to the area of a circle whose radius is 14 cm. If the breadth of the rectangle is 22 cm, what is the length? (a) 24 cm (b) 26 cm (c) 28 cm (d) Cannot be determined (e) None of these



Watch Video Solution

301. The area of a circle of radius 5 is numerically what percent of its circumference? (a) 200 (b) 225 (c) 240 (d) 250



[Watch Video Solution](#)

302. A man runs round a circular field of radius 50 m at the speed of 12 km/hr. What is the time taken by the man to take twenty rounds of the field? (a) 30 min. (b) 32 min. (c) 34 min. (d) None of these

[Watch Video Solution](#)

303. From a circular sheet of paper with radius 20 cm, four circles of radius 5 cm each are cut

out. What is the ratio of the uncut to the cut portion? (a) 1 : 3 (b) 3 : 1 (c) 4 : 1
(d) 4 : 3



Watch Video Solution

304. A cow is tethered in the middle of a field with a 14 feet long rope. If the cow grazes 100 sq. ft. per day, then approximately what time will be taken by the cow to graze the whole field? (a) 2 days (b) 6 days (c) 18 days (d) 24 days (d) None of these



[Watch Video Solution](#)

305. A circle and a rectangle have the same perimeter. The sides of the rectangle are 18 cm and 26 cm. What is the area of the circle? (a) 88 cm² (b) 154 cm² (c) 1250 cm² (d) Cannot be determined (e) None of these



[Watch Video Solution](#)

306. The area of a circular field is equal to the area of a rectangular field. The ratio of the

length and the breadth of the rectangular field is 14:11 respectively and perimeter is 100 metres. What is the diameter of the circular field? (a) 14 m (b) 22 m (c) 24 m (d) 28 m
(d) None of these



[Watch Video Solution](#)

307. The circumference of a circle, whose area is 24.64 m^2 , is (a) 14.64 m (b) 16.36 m (c) 17.60 m (d) 18.40 m



[Watch Video Solution](#)

308. What will be the cost of building a fence around a circular field with area equal to 18634 sq. metres if the cost of building the fence per metre is Rs 365? (a) Rs 1,76,660 (b) Rs 2,43,250 (c) Rs 56,60,220 (d) Rs 68,01,410
(d) None of these



Watch Video Solution

309. The circumference of a circular plot is 396 metres. What is the area of the circular plot?

- (a) 9446 sq. m (b) 9856 sq. m (c) 12474 sq. m
(d) 18634 sq. m (e) None of these



Watch Video Solution

- 310.** What is the area of a circle whose circumference is 1047.2 metres (a) 69843.23 sq. m
(b) 78621.47 sq. m (c) 79943.82 sq. m (d) 85142.28 sq. m
(e) 87231.76 sq. m



Watch Video Solution

311. The circumferences of two circles are 132 metres and 176 metres respectively. What is the difference between the area of the larger circle and the smaller circle? (a) 1048 sq. m
(b) 1076 sq. m (c) 1078 sq. m (d) 1090 sq. m
(e) None of these



Watch Video Solution

312. Cost of fencing a circular plot at the rate of Rs 15 per metre is Rs 3300. What will be the

cost of fencing the plot at the rate of Rs 100 per square metre? (a) Rs 2,20,000 (b) Rs 3,50,000 (c) Rs 3,85,000 (d) Cannot be determined (e) None of these



Watch Video Solution

313. If the circumference and the area of a circle are numerically equal, then the diameter is equal to $\frac{\pi}{2}$ (b) 2π (c) 2 (d) 4



Watch Video Solution

314. The magnitude of the area of a circle is seven times that of its circumference. What is the circumference (in units) of the circle? (a) 88 (b) 132 (c) 616 (d) Cannot be determined (e) None of these



Watch Video Solution

315. The difference between the circumference and radius of a circle is 37 cm. The area of the circle is (a) 111 cm^2 (b) 148 cm^2 (c) 154 cm^2 (d) 285 cm^2



[Watch Video Solution](#)

316. Two small circular plots of diameters 16 m and 12 m are to be replaced by a Bigger circular park. What would be the radius of this new park, if the new park has to occupy the same space as the two small parks? (a) 10 m
(b) 15 m (c) 20 m (d) 25 m



[Watch Video Solution](#)

317. The sum of areas of two circles A and B is equal to the area of a third circle C whose diameter is 30 cm, If the diameter of circle A is 18 cm, then the radius of circle B is (a) 10 cm (b) 12 cm (c) 15 cm (d) 18 cm



Watch Video Solution

318. The sum of the radii of two circles is 140 cm and the difference of their circumferences is 88 cm. Find the diameters of the circles.



[Watch Video Solution](#)

319. The radius of a circle is 20% more than the height of a right-angled triangle. The base of the triangle is 36 cm. If the area of triangle and circle be equal, what will be the area of circle? (a) 72 cm² (b) 128 cm² (c) 144 cm²
(d) 216 cm² (e) Cannot be determined

[Watch Video Solution](#)

320. A circular pond has area equal to 616 m^2 .

A circular stage is made at the centre of the pond whose radius is equal to half the radius of the pond. What is the area where water is present? (a) 454 sq. m (b) 462 sq. m (c) 532 sq. m (d) 564 sq. m



Watch Video Solution

321. Between a square of perimeter 44 cm and a circle of circumference 44 cm , which figure

has larger area and by how much? (a) Both have equal area (b) Square, 33 cm^2 (c) Circle, 33 cm^2 (d) Square, 495 cm^2



[Watch Video Solution](#)

322. The perimeter of a circular field and a square field are equal. If the area of the square field is 12100 m^2 , the area of the circular field will be (a) 15200 m^2 (b) 15300 m^2 (c) 15400 m^2 (d) 15500 m^2



[Watch Video Solution](#)

323. If the perimeter of a square is equal to the radius of a circle whose area is 39424 sq. m. What is the area of the square? (a) 441 sq. m (b) 784 sq. m (c) 1225 sq. m (d) Cannot be determined (e) None of these



Watch Video Solution

324. A wire can be bent in the form of a circle of radius 56 cm. If it is bent in the form of a

square, then its area will be (a) 3520 cm^2 (b) 6400 cm^2 (c) 7744 cm^2 (d) 8800 cm^2



Watch Video Solution

325. The circumference of a circle is equal to the side of a square whose area measures 407044 sq. cm . What is the area of the circle
(a) 22583.2 sq. cm (b) 32378.5 sq. cm (c) 39483.4 sq. cm (d) 41263.5 sq. cm (e) Cannot be determined



Watch Video Solution

326. The copper wire, when bent in the form of a square, encloses an area of 484 cm^2 . If the same wire is bent in the form of a circle, find the area enclosed by it.



Watch Video Solution

327. A circular wire of diameter 42 cm is bent in the form of a rectangle whose sides are in the ratio 6 : 5. The area of the rectangle is (a)

540 cm² (b) 1080 cm² (c) 2160 cm² (d)

4320 cm²



Watch Video Solution

328. A square lawn with side 100 m long has a circular flower bed in the centre. If the area of the lawn, excluding the flower bed, is 8614 m², the radius of the circular flower bed is (a) 21 m (b) 31 m (c) 41 m (d) None of these



Watch Video Solution

329. There is a rectangular tank of length 180 m and breadth 120 m in a circular field. If the area of the land portion of the field is 40000m^2 , what is the radius of the field? (a) 130 m (b) 135 m (c) 140 m (d) 145 m



Watch Video Solution

330. If the ratio between the areas of two circles is 4 : 1 then the ratio between their radii will be (a) 1 : 2 (b) 2 : 1 (c) 1 : 3 (d) 4 : 1



[Watch Video Solution](#)

331. The areas of two circular fields are in the ratio 16:49. If the radius of the latter is 14 m, then what is the radius of the former? (a) 4 m (b) 8 m (c) 18 m (d) 32 m



[Watch Video Solution](#)

332. The ratio of the radii of two circles is 3:2. What is the ratio of their circumferences?



[Watch Video Solution](#)

333. The ratio of the radii of two circles is $1 : 3$.

Then the ratio of their areas is (a) $1 : 3$ (b) $1 : 6$
(c) $1 : 9$ (d) None of these



[Watch Video Solution](#)

334. The circumferences of two circles are in the ratio $2 : 3$. Find the ratio of their areas.



[Watch Video Solution](#)

335. The perimeter of a circle is equal to the perimeter of a square. Then, their areas are in the ratio (a) $4 : 1$ (b) $11 : 7$ (c) $14 : 11$
(d) $22 : 7$



Watch Video Solution

336. The area of a square is equal to the area of a circle. The ratio between the side of the square and the radius of the circle is (a) $\sqrt{\pi} : 1$
(b) $1 : \sqrt{\pi}$ (c) $1 : \pi$ (d) $\pi : 1$



[Watch Video Solution](#)

337. If the areas of a circle and a square are equal then the ratio of their perimeters is (a) 1 : 1 (b) $2 : \pi$ (c) $\pi : 2$ (d) $\sqrt{\pi} : 2$

[Watch Video Solution](#)

338. The diameter of a wheel is 1.26m. How far will it travel in 500 revolutions? (a) 1492 m
(b) 1980 m (c) 2530 m (d) 2880 m

[Watch Video Solution](#)

339. The number of revolutions made by a wheel of diameter 56 cm in covering a distance of 1.1 km is: (a) 31.25 (b) 56.25 (c) 62.5 (d) 625



Watch Video Solution

340. The diameter of the driving wheel of a bus is 140cm. How many revolutions per

minute must the wheel make in order to keep a speed of 66km per hour?



[Watch Video Solution](#)

341. If the wheel of the engine of a train $4\frac{2}{7}$ metres in circumference makes 7 revolutions in 4 seconds, then the speed (in km/hr) of the train is (a) 27 (b) 28 (c) 29 (d) 30



[Watch Video Solution](#)

342. The radius of the wheel of a vehicle is 70 cm. The wheel makes 10 revolutions in 5 seconds. The speed of the vehicle is (a) 29.46 km/hr (b) 31.68 km/hr (c) 32.72 km/hr (d) 36.25 km/hr



Watch Video Solution

343. The diameter of a cycle wheel is 70 cm. A cyclist takes 30 hours to reach a destination at the speed of 22 km/hr. How many revolutions

will the wheel make during this journey? (a) 3 lakh (b) 4 lakh (c) 30 million (d) None of these



Watch Video Solution

344. Wheels of diameters 7 cm and 14 cm start rolling simultaneously from X and Y , which are 1980 cm apart, towards each other in opposite directions. Both of them make the same number of revolutions per second. If both of them meet after 10 seconds, the speed

of the smaller wheel is (a) 22 cm/sec (b) 44 cm/sec (c) 66 cm/sec (d) 132 cm/sec



Watch Video Solution

345. A toothed wheel of diameter 50 cm is attached to a smaller wheel of diameter 30 cm. How many revolutions will the smaller wheel make when the larger one makes 15 revolutions? (a) 18 (b) 20 (c) 25 (d) 30



Watch Video Solution

346. A small ring of negligible thickness and radius 2 cm moves on a bigger ring of radius 10 cm. How many rotations will the small ring take on the bigger ring to make a complete round? (a) 5 (b) 6 (c) 7 (d) 10



Watch Video Solution

347. Find the diameter of a wheel that makes 113 revolutions to go 2 km 26 decameters.

$4\frac{4}{13}m$ (b) $6\frac{4}{11}m$ (c) $12\frac{4}{11}m$ (d) $12\frac{8}{11}m$



[Watch Video Solution](#)

348. The circumference of the front wheel of a cart is 40 ft long and that of the back wheel is 48 ft long. What is the distance travelled by the cart, when the front wheel has done five more revolutions than the rear wheel? (a) 850 ft (b) 950 ft (c) 1200 ft (d) 1450 ft



[Watch Video Solution](#)

349. The radii of the front wheel and the rear wheel of a bike are 14 cm and 21 cm respectively. Rahul puts a red mark on the point of contact of each of the wheels with the ground when the bike is stationary. Once the bike start moving, then after what distance will the two red marks touch the ground again simultaneously? (a) 42 cm (b) 84 cm (c) 264 cm (d) 294 cm



Watch Video Solution

350. The circumferences of the front and rear wheels of a bicycle are 3.5 m and 3 m respectively. If the vehicle is moving at a speed of 15 m/sec, the shortest time in which both the wheels will make a whole number of turns is (a) 1.4 seconds (b) 2.1 seconds (c) 4 seconds (d) 6.4 seconds



Watch Video Solution

351. The circumference of the back-sided wheel of a vehicle is 1 m greater than that of front

side wheel. To travel 600 m, the front wheel rotates 30 times more than the back wheel.

The circumference of the front wheel is (a)

2m (b) 4m (c) 5m (d) None of

these



Watch Video Solution

352. Two boys are running on two different circular paths with same centre. If their radii are 5m and 10m, the maximum possible

distance between them is (a) 5 m (b) 10 m (c) 15 m (d) 20 m



Watch Video Solution

353. A circular ground whose diameter is 35 metres, has a 1.4 m broad garden around it. What is the area of the garden in square meters? (a) 160.16 (b) 176.16 (c) 196.16 (d) Data inadequate (e) None of these



Watch Video Solution

354. A circular grassy plot of land $42m$ in diameter has a path $3.5m$ wide running round it on the outside. Find the cost of gravelling the path at Rs 4 per square metre.



Watch Video Solution

355. A circle of radius 5 cm is drawn and another circle of 3 cm radius is cut out of this circle. What is the radius of a circle which has the same area as the area of the bigger circle

excluding the cut one? (a) 2 cm (b) 3 cm

(c) 4 cm (d) 4.5 cm



Watch Video Solution

356. The circumference of a circular ground is 88 metres. A strip of land, 3 metres wide, inside and along the circumference of the ground is to be levelled. What is the budgeted expenditure if the levelling costs Rs 7 per square metre? (a) Rs 1050 (b) Rs 1125 (c) Rs 1325 (d) Rs 1650



[Watch Video Solution](#)

357. The areas of two concentric circles forming a ring are 154 sq. cm and 616 sq. cm. The breadth of the ring is (a) 7 cm (b) 14 cm (c) 21 cm (d) 28 cm



[Watch Video Solution](#)

358. A circular road runs around a circular garden. If the difference between the circumference of the outer circle and the inner

circle is 44 m, the width of the road is (a) 3.5 m (b) 4 m (c) 7 m (d) 7.5 m



[Watch Video Solution](#)

359. A small disc of radius r is cut out from a disc of radius R . The weight of the disc which now has a hole in it, is reduced to $\frac{24}{25}$ of the original weight. If $R = x r$, what is the value of x ? (a) 4 (b) 4.5 (c) 24 (d) 25 (e) None of these



[Watch Video Solution](#)

360. A circular swimming pool is surrounded by a concrete wall 4 ft. wide. If the area of the concrete wall surrounding the pool is $\frac{11}{25}$ that of the pool, then the radius of the pool is (a) 8 ft (b) 16 ft (c) 20 ft (d) 30 ft



Watch Video Solution

361. The ratio of the outer and the inner perimeters of a circular path is 23 : 22. If the path is 5 metres wide, the diameter of the

inner circle is (a) 55 m (b) 110 m (c) 220
m (d) 230 m



Watch Video Solution

362. If a region bounded by a circle C is to be divided into three regions of equal areas by drawing into circles concentric with C , then the ratio of the radii of the two circles must be
(a) $1 : 3$ (b) $1 : \sqrt{3}$ (c) $1 : 2$ (d) $1 : \sqrt{2}$



Watch Video Solution

363. The area of a circle is increased by 22 cm^2 when its radius is increased by 1 cm. The original radius of the circle is (a) 6 cm (b) 3 cm (c) 4 cm (d) 3.5 cm



Watch Video Solution

364. The perimeter of a square is equal to twice the perimeter of a rectangle of length 8 cm and breadth 7 cm. What is the circumference of a semi-circle whose diameter is equal to the side of the square? (rounded

off to two decimal places) (a) 23.57 cm (b)

38.57 cm (c) 42.46 cm (d) 47.47 cm (e)

None of these



Watch Video Solution

365. What will be the area of a semi-circle of 14 m diameter? (a) 22 m² (b) 77 m² (c) 154 m² (d) 308 m² (e) None of these



Watch Video Solution

366. A semi-circular shaped window has diameter of 63 cm. Its perimeter equals (a) 126 cm (b) 162 cm (c) 198 cm (d) 251 cm



Watch Video Solution

367. A vertical rod of height 33 metres is bent to form a semi-circular shape so that the top touches the ground. The distance between the top head and the base on the ground is (a) 10.5 m (b) 12 m (c) 21 m (d) 33 m





[Watch Video Solution](#)

368. What will be the area of a semi-circle whose perimeter is 36 cm? (a) 154 cm² (b) 168 cm² (c) 308 cm² (d) Data inadequate (e) None of these



[Watch Video Solution](#)

369. If the area of a semi-circular plot is 11088 m², then its perimeter is (a) 264 m (b) 348 m (c) 432 m (d) 452 m



[Watch Video Solution](#)

370. If a wire is bent into the shape of a square, then the area of the square is 81 sq. cm. When the wire is bent into a semi-circular shape, then the area of the semi-circle will be
(a) 22 cm² (b) 44 cm² (c) 77 cm² (d) 154 cm²



[Watch Video Solution](#)

371. If $MN = x$, then what is the area of the shaded region? (FIGURE) (a) πx^2 (b) $\frac{\pi x^2}{2}$ (c) $\frac{\pi x^2}{2}$ (d) $\frac{\pi x^2}{4}$



Watch Video Solution

372. In the given figure, ABC is a right-angled triangle with B as the right angle. Three semi-circles are drawn with AB , BC and AC as diameters. What is the area of the shaded portion if the area of the triangle ABC is 12

square units? (FIGURE) (a) 6 square units (b) 12 square units (c) 24 square units (d) Cannot be determined as the data is insufficient



[Watch Video Solution](#)

373. If in the given figure $OP = OQ = 14\text{ cm}$ and OP , PQ and OQ are all joined by semi-circles, then the perimeter of the shaded area is equal to (FIGURE) (a) 88 cm (b) 176 cm (c) 264 cm (d) 352 cm



[Watch Video Solution](#)

374. In given diagram, $ABCD$ is a square and semi-circular regions have been added to it by drawing two semi-circles with AB and CD as diameters. If the total area of the three regions is 350 sq. cm, then the length of the side of the square is equal to (FIGURE)

$5\sqrt{7} \text{ cm}$ (b) 7 cm (c) 13 cm (d) 14 cm



Watch Video Solution

375. If r and R and the respective radii of the smaller and the bigger semi-circles then the area of the shaded portion in the given figure is: (FIGURE) πr^2 squnits (b)

$\pi R^2 - \pi r^2$ squnits (c) $\pi R^2 + \pi r^2$ squnits (d)

πR^2 squnits



Watch Video Solution

376. Two circular wheels of the same radius r have their central hubs at a distance of a from

one another. The minimum length of a fan belt which will pass around both the wheels is

(FIGURE) $2(a + \pi r)$ (b) $a + \frac{\pi r}{2}$ (c) $2a + \pi r$

(d) $\frac{a + \pi r}{2}$



Watch Video Solution

377. The area of the shaded region in the adjoining figure is (FIGURE) $a^2(\pi - 1) \text{ sq units}$

(b) $a^2 \left(\frac{\pi}{2} - 1 \right) \text{ sq units}$ (c)

$\frac{a^2}{2} (\pi - 1) \text{ sq units}$ (d) $\frac{a^2}{2} \left(\frac{\pi}{2} - 1 \right) \text{ sq units}$



Watch Video Solution

378. An athletic track 14 m wide consists of two straight sections 120 m long joining and semicircular ends inner diameter 35 cm . find area



Watch Video Solution

379. A square of area 40 sq. cm is inscribed in a circle as shown in the figure. The area (in sq. cm) of the semi-circle is 20 π (b) 25 π (c) 30 π (d) 40 π



[Watch Video Solution](#)

380. A square is inscribed in a circle and another in a semi-circle of same radius. The ratio of the area of the first square to the area of the second square is (a) $2 : 5$ (b) $5 : 2$
(c) $4 : 5$ (d) $5 : 4$



[Watch Video Solution](#)

381. Semi-circular lawns are attached to the edges of a rectangular field measuring $42m \times 35m$. The area of the total field is (a) 1358 m^2 (b) 3818.5 m^2 (c) 5813 m^2 (d) 8318 m^2



Watch Video Solution

382. The area of a sector of a circle of radius 5 cm, formed by an arc of length 3.5 cm, is (a) 7.5 cm^2 (b) 7.75 cm^2 (c) 8.5 cm^2 (d) 8.75 cm^2



[Watch Video Solution](#)

383. In a circle of radius 7 cm, an arc subtends an angle of 108° at the centre. The area of the sector is (a) 43.2 cm^2 (b) 44.2 cm^2 (c) 45.2 cm^2 (d) 46.2 cm^2

[Watch Video Solution](#)

384. A sector of 56° has an area of 17.6 cm^2 . Then its radius will be (a) 1.5 cm (b) 3 cm (c) 4.2 cm (d) 6 cm



Watch Video Solution

385. There are three circles each of radius $\sqrt{7} \text{ cm}$. A triangle is formed by joining their centres. The angles at the centre made by the triangle are shown in the figure. The area of the shaded portion is (FIGURE) $\frac{4}{7} \text{ cm}^2$ (b) $\frac{11}{7} \text{ cm}^2$ (c) $\frac{22}{7} \text{ cm}^2$ (d) 11 cm^2



Watch Video Solution

386. The minute hand of a clock is 7 cm long.

Find the area of the sector made by the

minute hand between 7 a.m. and 7.05 a.m. (a)

11.5 cm² (b) 12.8 cm² (c) 15.4 cm² (d)

None of these



Watch Video Solution

387. A horse is tied at the corner of a

rectangular field whose length is 20 m and

width is 16 m, with a rope whose length is 14

m. Find the area which the horse can graze: (a)

144 sq. m (b) 154 sq. m (c) 156 sq. m (d)

164 sq. m



Watch Video Solution

388. Area of the segment of a circle is (a) $\frac{1}{2} l r$

(b) $\frac{\pi r \theta}{180^\circ}$ (c) $r^2 \left(\frac{\pi \theta}{360^\circ} - \frac{1}{2} \sin \theta \right)$ (d) None

of these



Watch Video Solution

389. If in a circle of radius 21 cm, an arc subtends an angle of 56° at the centre, the length of the arc is (a) 15.53 cm (b) 16.53 cm (c) 18.53 cm (d) 20.53 cm



Watch Video Solution

390. If the circumference of a circle is 100 units, then what will be the length of the arc described by an angle of 20 degrees? (a) 5.55

units (b) 4.86 units (c) 5.85 units (d) None of these



Watch Video Solution

391. The area of the greatest circle which can be inscribed in a square whose perimeter is

120 cm, is (a) $\frac{22}{7} \times \left(\frac{7}{2}\right)^2 cm^2$ (b)

$\frac{22}{7} \times \left(\frac{9}{2}\right)^2 cm^2$ (c) $\frac{22}{7} \times \left(\frac{15}{2}\right)^2 cm^2$ (d)

$\frac{22}{7} \times (15)^2 cm^2$



Watch Video Solution

392. The area of the largest circle, that can be drawn inside a rectangle with sides 18 cm by 14 cm, is (a) 49 cm^2 (b) 154 cm^2 (c) 378 cm^2 (d) 1078 cm^2



Watch Video Solution

393. The sides of a rectangle are 8 cm and 6 cm. The corners of the rectangle lie on a circle. Find the area of the circle without the

rectangle. (a) 30.5 cm^2 (b) 39 cm^2 (c) 42.4 cm^2 (d) 65.3 cm^2



Watch Video Solution

394. The area of the rectangle circumscribed by a circle is 32 cm^2 and the length of one side of the rectangle is 8 cm . The length of the diameter of the circle is (a) 16 cm (b) 12 cm (c) $5\sqrt{2} \text{ cm}$ (d) $4\sqrt{5} \text{ cm}$



Watch Video Solution

395. The area of a circle is 220 sq. cm. The area of a square inscribed in this circle will be (a) 49 cm² (b) 70 cm² (c) 140 cm² (d) 150 cm²



Watch Video Solution

396. A square is inscribed in a circle whose radius is 4 cm. The area of the portion between the circle and the square is:
($8\pi - 16$) (b) ($8\pi - 32$) (c) ($16\pi - 16$) (d) ($16\pi - 32$)



Watch Video Solution

397. The circumference of a circle is 100 cm.

The side of a square inscribed in the circle is

$50\sqrt{2} \text{ cm}^2$ (b) $\frac{100}{\pi} \text{ cm}^2$ (c) $\frac{50\sqrt{2}}{\pi} \text{ cm}^2$ (d)

$\frac{100\sqrt{2}}{\pi} \text{ cm}^2$



Watch Video Solution

398. A circle is inscribed in a square of side 54

cms and another circle circumscribes the same

square. Then the ratio of circumferences of

the bigger circle to the smaller circle is $1 : \sqrt{2}$

(b) $\sqrt{2} : 1$ (c) $\sqrt{3} : 1$ (d) None of these



Watch Video Solution

399. A circle is circumscribed around a square as shown in the figure. The area of one of the four shaded portions is equal to $\frac{4}{7}$. The radius of the circle is (FIGURE) $\sqrt{2}$ (b) $\frac{1}{\sqrt{2}}$ (c) 2 (d) 3



Watch Video Solution

400. The ratio of the areas of the incircle and the circumcircle of a square is (a) $1 : 2$ (b) $\sqrt{2} : 1$ (c) $1 : \sqrt{2}$ (d) $2 : 1$



Watch Video Solution

401. A square circumscribes a circle and another square is inscribed in this circle with one vertex at the point of contact. The ratio of the areas of the circumscribed and the inscribed squares is (a) 1 (b) $2 : 1$ (c) 3 (d) 4



Watch Video Solution

402. What is the area of the shaded region?

(FIGURE) $32 - 4\pi$ squnits (b)

$32 - 8\pi$ squnits (c) $16 - 4\pi$ squnits (d)

$16 - 8\pi$ squnits



Watch Video Solution

403. Four equal sized maximum circular plates are cut off from a square paper sheet of area

784 cm². The circumference of each plate is (a)

22 cm (b) 44 cm (c) 66 cm (d) 88 cm



Watch Video Solution

404. There are 4 semi-circular gardens on each side of a square-shaped pond with each side 21 m. The cost of fencing the entire plot at the rate of Rs 12.50 per metre is (a) Rs 1560 (b) Rs 1650 (c) Rs 3120 (d) Rs 3300



Watch Video Solution

405. The circumradius of an equilateral triangle is 8 cm. The inradius of the triangle (a) 3.25 cm (b) 4 cm (c) 3.5 cm (d) 4.25 cm



Watch Video Solution

406. The ratio of the areas of the incircle and circumcircle of an equilateral triangle is (a) 1 : 2 (b) 1 : 3 (c) 1 : 4 (d) 1 : 9



Watch Video Solution

407. The radius of the circumcircle of an equilateral triangle of side 12 cm is $\frac{4\sqrt{2}}{3} \text{ cm}$

(b) $4\sqrt{2} \text{ cm}$ (c) $\frac{4\sqrt{3}}{3} \text{ cm}$ (d) $4\sqrt{3} \text{ cm}$



Watch Video Solution

408. The area of the incircle of an equilateral triangle of side 42 cm is $22\sqrt{3} \text{ cm}^2$ (b) 231 cm^2 (c) 462 cm^2 (d) 924 cm^2



Watch Video Solution

409. The area of a circle inscribed in an equilateral triangle is 154cm^2 . Find the perimeter of the triangle.



Watch Video Solution

410. A circle is inscribed in a square. An equilateral triangle of side $4\sqrt{3}\text{ cm}$ is inscribed in that circle. The length of the diagonal of the square is $4\sqrt{2}\text{cm}$ (b) 8 cm (c) $8\sqrt{2}\text{cm}$ (d) 16 cm



Watch Video Solution

411. In the given figure, ABC is an equilateral triangle which is inscribed inside a circle and whose radius is r . Which of the following is the area of the triangle?

$$(r + DE)^{\frac{1}{2}}(r - DE)^{\frac{3}{2}} \quad (b)$$

$$(r - DE)^{\frac{1}{2}}(r + DE)^2 \quad (c)$$

$$(r - DE)^2(r + DE)^2 \quad (d)$$

$$(r - DE)^{\frac{1}{2}}(r + DE)^{\frac{3}{2}}$$



Watch Video Solution

412. Three boys are standing on a circular boundary of a fountain. They are at equal distance from each other. If the radius of the boundary is 5 m, the shortest distance between any two boys is (a) $\frac{5\sqrt{3}}{2}m$ (b) $5\sqrt{3}m$ (c) $\frac{15\sqrt{3}}{2}m$ (d) $\frac{10\pi}{3}m$



Watch Video Solution

413. What is the area of an equilateral triangle inscribed in a circle of unit radius?

$$3\sqrt{3} \text{ squnits} \quad (b) \quad \frac{3\sqrt{3}}{2} \text{ squnits} \quad (c) \quad \frac{3\sqrt{3}}{4} \text{ squnits} \quad (d) \quad \frac{3\sqrt{3}}{16} \text{ squnits}$$



Watch Video Solution

414. The sides of a triangle are 6 cm, 11 cm and 15 cm. The radius of its incircle is $3\sqrt{2} \text{ cm}$ (b)

$$\frac{4\sqrt{2}}{5} \text{ cm} \quad (c) \quad \frac{5\sqrt{2}}{4} \text{ cm} \quad (d) \quad 6\sqrt{2} \text{ cm}$$



Watch Video Solution

415. The product of the lengths of three sides of a triangle is 196 and the radius of its circumscribe is 2.5 cm. The area of the triangle is (a) 19.6 cm^2 (b) 39.2 cm^2 (c) 61.25 cm^2 (d) 122.5 cm^2



Watch Video Solution

416. A triangle with sides 13 cm, 14 cm and 15 cm is inscribed in a circle. The radius of the

circle is (a) 2 cm (b) 3 cm (c) 4 cm (d)

8.125 cm



Watch Video Solution

417. The perimeter of a triangle is 30 cm and the circumference of its incircle is 88 cm. The area of the triangle is (a) 70 cm² (b) 140 cm² (c) 210 cm² (d) 420 cm²



Watch Video Solution

418. If in a triangle, the area is numerically equal to the perimeter, then the radius of the inscribed circle of the triangle is (a) 1 (b) 1.5 (c) 2 (d) 3



Watch Video Solution

419. An equilateral triangle, a square and a circle have equal perimeters. If T denotes the area of the triangle, S , the area of the square and C , the area of the circle, then `S





[Watch Video Solution](#)

420. A circle, a square and an equilateral triangle have the same area. The correct increasing order of the perimeters will be (a) triangle, square, circle (b) triangle, circle, square (c) circle, triangle, square (d) circle, square, triangle



[Watch Video Solution](#)

421. What is the area of the largest triangle that can be inscribed in a semicircle of radius r unit.



Watch Video Solution

422. ABC is a right-angled triangle with right angle at B . If the semi-circle on AB with AB as diameter encloses an area of 81 sq. cm and the semi-circle on BC with BC as diameter encloses an area of 36 sq. cm, then the area of

the semi-circle on AC with AC as diameter
will be (a) 117 cm^2 (b) 121 cm^2 (c) 217 cm^2 (d)
 221 cm^2



Watch Video Solution

423. If the radius of a circle is increased by
 75% , then its circumference will increase by (a)
 25% (b) 50% (c) 75% (d) 100%



Watch Video Solution

424. When the circumference of a toy balloon is increased from 20 cm to 25 cm, its radius is increased by (a) $\frac{\pi}{5}$ (b) $\frac{5}{\pi}$ (c) 5 (d) $\frac{5}{2\pi}$



Watch Video Solution

425. *A* can go round a circular path 8 times in 40 minutes. If the diameter of the circle is increased to 10 times the original diameter, then the time required by *A* to go round the new path once, travelling at the same speed as

before, is (a) 20 min. (b) 25 min. (c) 50 min. (d) 100 min.



Watch Video Solution

426. If the radius of a circle is increased by 6%, then the area is increased by (a) 6% (b) 12% (c) 12.36% (d) 16.64%



Watch Video Solution

427. If the radius of a circle is increased by 200%, then its area will increase by (a) 200% (b) 400% (c) 800% (d) 900%



Watch Video Solution

428. If the radius of a circle is diminished by 10%, then its area is diminished by (a) 10%
(b) 19% (c) 20% (d) 36%



Watch Video Solution

429. If the radius of a circle is doubled, its area is increased by (a) 100% (b) 200% (c) 300% (d) 400%



Watch Video Solution

430. If the radius of a circle is increased to 3 times, then how many times will its circumference be increased? $\frac{1}{3}$ times (b) 2 times (c) 3 times (d) 9 times



Watch Video Solution

431. If the circumference of a circle increases from 4π to 8π , what change occurs in its area? (a) It is halved. (b) It doubles. (c) It triples. (d) It quadruples.



Watch Video Solution

432. If the circumference of a circle is increased by 20%, what will be the effect on the circle? (a) 40% increase (b) 44%

increase (c) 48% increase (d) Cannot be
determined (e) None of these



Watch Video Solution

433. If the circumference of a circle is decreased by 50% then the percentage of decrease in its area is (a) 25 (b) 50 (c) 60 (d) 75



Watch Video Solution

434. Three equal circles are described with vertices of the triangles as centres. If the radius of each circle is r , the sum of areas of the portions of the circles intercepted in a triangle is $2\pi r^2$ (b) $\frac{3}{2}\pi r^2$ (c) πr^2 (d) $\frac{1}{2}\pi r^2$



Watch Video Solution

435. Three circles each of radius 3.5 cm are drawn in such a way that each of them

touches the other two. Find the area enclosed between these three circles (shaded region).



[Watch Video Solution](#)

436. Four circles each of radius ' a ' units touch one another. The area enclosed between them in square units is (a) $\frac{a^2}{7}$ (b) $3a^2$ (c) $\frac{6a^2}{7}$
(d) $\frac{41a^2}{7}$



[Watch Video Solution](#)

437. Four horses are tethered at four corners of a square plot of side 63 metres so that they just cannot reach one another. The area left ungrazed is (a) 675.5 m² (b) 780.6 m² (c) 785.8 m² (d) 850.5 m²



Watch Video Solution

438. In the adjoining figure, if the radius of each of the four outer circles is r , what is the

radius of the inner circle? (FIGURE) (a)

$\frac{2}{\sqrt{2} + 1}r$ (b) $\frac{1}{\sqrt{2}}r$ (c) $(\sqrt{2} - 1)r$ (d) $\sqrt{2}r$



Watch Video Solution

439. Four equal circles are described at the four corners of a square so that each touches two of the others. The area enclosed by the circumferences of the circles is $13\frac{5}{7}$ sq. cm. Find the radius of the circle. (a) 2.5 cm (b) 4 cm (c) 6 cm (d) 7.5 cm



Watch Video Solution

440. In order to reach his office on time, Mr. Roy goes through the middle passage of a round fort which he takes 14 minutes to pass through. However, on a certain day, due to repairs, the straight road being blocked, he had to take the roundabout way as a result of which he reached his office late. How late was he? (a) 6 min (b) 8 min (c) 12 min (d) $7\frac{1}{2}$ min



Watch Video Solution

441. A kite-shaped quadrilateral of the largest possible area is cut from a circular sheet of paper. If the lengths of the sides of the kite are in the ratio $3 : 3 : 4 : 4$, what percentage of the circular sheet is wasted? (a) 34% (b) 39% (c) 42% (d) 47%



Watch Video Solution

442. A cow is tethered at point A by a rope. Neither the rope nor the cow is allowed to

enter the triangle ABC . $\angle BAC = 30^\circ$,

$$AB = AC = 10m. \quad (a) \quad \frac{133\pi}{6} \text{ sq } m \quad (b)$$

$$121\pi \text{ sq } m \quad (c) \quad 132\pi \text{ sq } m \quad (d) \quad \frac{176\pi}{3} \text{ sq } m$$



Watch Video Solution

443. A cow is tethered at point A by a rope.

Neither the rope nor the cow is allowed to

enter the triangle ABC . $\angle BAC = 30^\circ$,

$$AB = AC = 10m. \quad (a) \quad \frac{133\pi}{6} \text{ sq } m \quad (b)$$

$$121\pi \text{ sq } m \quad (c) \quad 132\pi \text{ sq } m \quad (d) \quad \frac{176\pi}{3} \text{ sq } m$$



Watch Video Solution

444. Two identical circles intersect so that their centers, and the points, at which they intersect, form a square of side 1 cm. The area in sq cm of the portion that is common to the two circles is



Watch Video Solution

445. A one-rupee coin is placed on a plain paper. How many coins of the same size can be placed round it so that each one touches the

centre and adjacent coins? (a) 3 (b) 4

(c) 6 (d) 7



Watch Video Solution

446. A skating champion moves along the circumference of a circle of radius 28 m in 44 sec. How many seconds will it take her to move along the perimeter of a hexagon of side 48 m? (a) 48 (b) 68 (c) 72 (d) 84 (d) 90



Watch Video Solution

447. Each side of a regular hexagon is 1 cm.

The area of the hexagon is $3\sqrt{2} \text{ cm}^2$ (b)

$4\sqrt{3} \text{ cm}^2$ (c) $\frac{3\sqrt{3}}{4} \text{ cm}^2$ (d) $\frac{3\sqrt{3}}{2} \text{ cm}^2$



Watch Video Solution

448. The difference between the areas of the circumcircle and the incircle of a regular polygon of n sides with each side of length $2a$, is πa^2 (b) $(2n + 1)\pi a^2$ (c) $\pi n a^2$ (d) $2\pi n a^2$



Watch Video Solution

449. If a circle touching all the n sides of a polygon of perimeter $2p$ has radius r , then the area of the polygon is $(p - n)r$ (b) pr (c) $(2p - n)r$ (d) $(p + n)r$



Watch Video Solution

450. Two equal circles are drawn in square in such a way that a side of the square forms diameter of each circle. If the remaining area of the square is 42 cm^2 . How much will the

diameter of the circle measures? (a) 3.5 cm

(b) 4 cm (c) 14 cm (d) 7.5 cm



Watch Video Solution

451. If radius of a circle is $3cm$, what is the area of the circle in sq. cm 6π (b) 9π (c) $\frac{3\pi}{2}$ (d)

$9\pi^2$



Watch Video Solution

452. A plate on square base made of brass is of length x cm and width 1 mm. The plate weighs 4725g .If 1cm^3 of brass weighs 8.4 gram, then the value of x :



Watch Video Solution

453. Area of a rectangle is 150 metre sq. When the breadth of the same rectangle is increased by 2 meter and the length decreased by 5 metre the area of the rectangle decreases by

30 metre square. What is the perimeter of the square whose side are equal to the length of the rectangle? (a) 76 m (b) 72 m (c) 120 m (d) 60 m



Watch Video Solution

454. The area of a circle whose radius is the diagonal of a square whose area is 4 sq. units is 16π squnits (b) 4π squnits (c) 6π squnits (d) 8π squnits



Watch Video Solution

455. The ratio of circumference and diameter of a circle is $22 : 7$. If the circumference be $1\frac{4}{7}m$. then the radius of the circle is $\frac{1}{3}m$ (b) $\frac{1}{2}m$ (c) $\frac{1}{4}m$ (d) 1 m



Watch Video Solution

456. A rectangular carpet has area $120m^2$ and perimeter 46 metres. The length of its diagonals is $15m$ (b) $16m$ (c) $17m$ (d) $20m$



Watch Video Solution

457. The total surface area of a right circular cylinder with radius of the base 7 cm and height 20 cm is (a) 900 cm² (b) 140 cm²
(c) 1000 cm² (d) 1188 cm²



Watch Video Solution

458. The height of a triangle is equal to the perimeter of a square whose diagonal is $8\sqrt{2}$ metre and the base of the same triangle is

equal to the side of a square whose area is 729sq. metre. What is the area of the triangle? (in sq. metre) (a) 378 (b) 206 (c) 472 (d) 432



Watch Video Solution

459. A boundary wall around a rectangular plot is constructed at a total cost of Rs 46000 at the rate of Rs 200 per metre. What is the area of the plot if the respective ratio between the breadth and the length of the plot is 10 :

13? (in sq. metre) (a) 3750 (b) 3250 (c)
3000 (d) 3900



Watch Video Solution

460. Four circles having equal radii are drawn with centres at the four corners of a square. Each circle touches the other two adjacent circles. If the remaining area of the square is 168 cm^2 , what is the size of the radius of the circle? (in centimeters) (a) 14 (b) 1.4
(c) 35 (d) 21



[Watch Video Solution](#)

461. A courtyard is 25m long and 16m broad is to be paved with bricks of dimensions 20cm and 10cm. What is the total number of bricks required? (a) 16000 (b) 18000 (c) 20000 (d) 22000



[Watch Video Solution](#)

462. The diameter of a circle is equal to the perimeter of a square whose area is 3136 cm^2 .

What is the circumference of the circle? (a) 352 cm (b) 704 cm (c) 39424 cm (d) 1024 cm



Watch Video Solution

463. The base of triangle is 15 cm and height is 12 cm. The height of another triangle of double the area having base 20cm is (a) 22 cm (b) 20 cm (c) 18 cm (d) 10 cm



Watch Video Solution

464. The base of an isosceles is 14 cm and its perimeter is 36 cm. Find its area. $42\sqrt{2}$ sqcm.

(b) 42 sqcm . (c) 84 sqcm (d) 48 sqcm



Watch Video Solution

465. What would be the area of a rectangle whose area is equal to the area of a circle of radius 7 cm? (a) 77 cm² (b) 154 cm² (c) 184 cm² (d) 180 cm²



Watch Video Solution

466. If the total surface area of a cube is 864 square cm, find the volume of the cube: (a) 1728 cm³ (b) 1624 cm³ (c) 144 cm³ (d) 1684 cm³



Watch Video Solution

467. The circumference of a circle is 10% more than the perimeter of a square. If the difference between the area of the circle and that of the square is 216 cm², how much does

the diagonal of the square measure? (in cm)

$14\sqrt{2}$ (b) 14 (c) 20 (d) $20\sqrt{2}$



Watch Video Solution

468. A circular grassy plot of land $42m$ in diameter has a path $3.5m$ wide running round it on the outside. Find the cost of gravelling the path at Rs 4 per square metre.



Watch Video Solution

469. Direction: In the question below there is a question-statement and two statements numbered I and II. You have to decide whether the data given in the statements are sufficient to answer the questions. Read with the statements and given answer: (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question. (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer

the question. (C) If the data either in Statement I alone or statement II alone are sufficient to answer the question. (D) If the data given in both Statements I and II together are not sufficient to answer the question. (E) If the data in both Statements I and II together are necessary to answer the question. What is the area of the circle? I. Perimeter of the circle is 88 cm II. Diameter of the circle is 28 cm



Watch Video Solution

470. The area of a rhombus with side 13 cm and one diagonal 10 cm will be (a) 140 cm²
(b) 130 cm² (c) 120 cm² (d) 110 cm²



Watch Video Solution

471. A piece of wire when bent to form a circle will have a radius of 84cm. If the wire is bent to form a square, the length of a side of the square is (a) 216 cm (b) 133 cm (c) 132 cm
(d) 168 cm



Watch Video Solution

472. A hall 50m long and 45m broad is to be paved with square tiles. Find the largest tile as well as its number in the given options so that the tiles exactly fit in the hall. (a) 36 sq. m and 80 tiles (b) 16 sq. m and 80 tiles (c) 25 sq. m and 90 tiles (d) 36 sq. m and 90 tiles



Watch Video Solution

473. The perimeters of a regular hexagon and a square are equal. The ratio of the area of the

square to the area of the hexagon is:



Watch Video Solution