Circle

1. Ratio of radius of two circle is 7 : 4. What is the ratio of the area of the both circles?
(A) 16 : 23 **(B)** 7 : 6
(C) 49 : 16 **(D)** 21 : 8
(E) 15 : 14

2. Area of Ist circle and circumference of IInd circle is 1386 cm^2 and 176 cm respectively. There is a square whose side is $35\frac{5}{7}\%$ of twice of sum of the radius of both the circles. Find the perimeter of the square (in cm)?
(A) 132 **(B)** 136
(C) 140 **(D)** 116
(E) 124

3. Circumference of a circle to the perimeter of a square is 33 : 16. Sum of the radius of the circle and one side of the square is 37 meter. Find the area of the square.
(A) 144 m^2 **(B)** 196 m^2
(C) 289 m^2 **(D)** 256 m^2
(E) 324 m^2

4. The radius of a circle is 14 cm. what is the area of another circle having radius 1.5 time of actual circle ?
(A) 1296 cm^2 **(B)** 1386 cm^2
(C) 1352 cm^2 **(D)** 1485 cm^2
(E) 1276 cm^2

5. Inside a square plot a circular garden is developed which exactly fits in the square plot and the diameter of the garden is equal to the side of the square plot which is 28 metre. What is the area of the space left out in the square plot after developing the garden?
(A) 98m
(B) 146m
(C) 84m
(D) 168m
(E) none of these

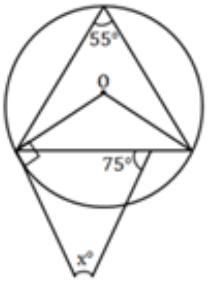
6. If the ratio of areas of an equilateral triangle to a circle is $\sqrt{3} : 16\pi$, what is the ratio of side length of the equilateral triangle to the radius of the circle?
(A) 3 : 2
(B) 3 : 4
(C) 1 : 2
(D) 2 : 3
(E) 2 : 1

7. The cost of gardening a circular field C at the rate of 10 Rs./m2 is Rs. 3465. The side of square S is equal to the diameter of the circle C. Find the perimeter of the square S.
(A) 76
(B) 92
(C) 84
(D) 68
(E) 65

8. Length of a rectangular land is twice the radius of a circle of circumference 132 cm. The land area got increased by 144 sq.cm, when a square land is attached along the breadth of the rectangle. Find area of rectangle in sq.cm.
(A) 1008
(B) 257
(C) 504
(D) 756
(E) 1512

9. Sum of circumference of a circle and perimeter of a rectangle is 220 cm while area of circle is 1386 sq. cm. If length of rectangle is $33\frac{1}{3}\%$ more than radius of the given circle then find the area of rectangle?
(A) 408 cm^2
(B) 418 cm^2
(C) 428 cm^2
(D) 448 cm^2
(E) 438 cm^2

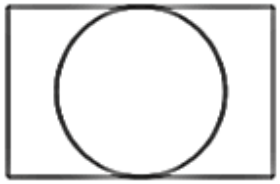
10.



Quantity I: x°
Quantity II: 55°
(A) Quantity I > Quantity II
(B) Quantity I < Quantity II
(C) Quantity I Quantity II
(D) Quantity I = Quantity II

11. If the sum of diameter of a circle of radius 'r' and radius of semicircle of radius 'R' is 42 cm, then find the radius of another circle whose circumference is 200% more than sum of circumference of given circle and semicircle ?
(A) 42 cm **(B)** 48 cm
(C) 63 cm **(D)** 54 cm
(E) 60 cm

12. Quantity I: Area of circle, given in figure, is half of the area of rectangle. Value of percent by which length of rectangle is more than breadth.



Quantity II: A pair of opposite sides of a square when increase by 10 cm, then area of figure increased by 400 cm². Value of percent by which area increased.
(A) Quantity I > Quantity II
(B) Quantity I < Quantity II
(C) Quantity I ≥ Quantity II
(D) Quantity I ≤ Quantity II
(E) Quantity I = Quantity II or No relation

Direction (13–15): Study the given information carefully and answer the following questions.

An apple pie of radius R cm is cut into X equal pieces, each piece having an area of 0.77 cm². But later, it was found that 50% of the pie was rotten so the remaining 50% was cut into (X – 3) pieces with an area of 0.616 sq.

13. Find out the value of X.
(A) 10 **(B)** 12
(C) 8 **(D)** 6
(E) None of these

14. Find out the circumference of the original pie?
(A) 44/25 cm **(B)** 88/25 cm
(C) 176/25 cm **(D)** 132/25 cm
(E) None of these

15. If initially, entire pie would have been cut into (X + 3) identical pieces then what would have been area of each piece?
(A) 0.64 cm² **(B)** 0.56 cm²
(C) 0.28 cm² **(D)** 0.42 cm²
(E) None of these