PERL EDUCATION

DPP

DAILY PRACTICE PAPER

**MCQ WORKSHEET-I**
AREAS RELATED TO CIRCLES

MATHEMATICS
10TH CBSE

1. The area of a circle is 49π cm^2. Its circumference is
   (a) 7π cm   (b) 14π cm   (c) 21π cm   (d) 28π cm

2. The perimeter of circular field is 242cm. The area of the field is
   (a) 9317 cm^2 (b) 18634 cm^2 (c) 4658.5 cm^2 (d) none of these

3. The area of a circle is 38.5 cm^2. Its circumference is
   (a) 62 cm   (b) 12.1 cm   (c) 11 cm   (d) 22 cm

4. The difference between the circumference and radius of a circle is 37 cm. The area of the circle is
   (a) 111 cm^2 (b) 184 cm^2 (c) 154 cm^2 (d) 259 cm^2

5. The circumference of two circles are in the ratio 2 : 3. The ratio of their areas is
   (a) 2 : 3   (b) 4 : 9   (c) 9 : 4   (d) none of these

6. On increasing the diameter of circle by 40%, its area will be increased by
   (a) 40%   (b) 80%   (c) 96%   (d) none of these

7. On decreasing the radius of the circle by 30%, its area is decreased by
   (a) 30%   (b) 60%   (c) 45%   (d) none of these

8. The area of the square is the same as the area of the circle. Their perimeter re in the ratio
   (a) 1 : 1   (b) π : 2   (c) 2 : π (d) none of these

9. The areas of the two circle are in the ratio 4 : 9. The ratio of their circumference is
   (a) 2 : 3   (b) 4 : 9   (c) 9 : 4   (d) 4 : 9

10. In making 1000 revolutions, a wheel covers 88 km. The diameter of the wheel is
    (a) 14 m   (b) 24 m   (c) 28 m   (d) 40 m

11. The diameter of a wheel is 40 cm. How many revolutions will it make an covering 176 m?
    (a) 140   (b) 150   (c) 160   (d) 166

12. The radius of wheel is 0.25 m. How many revolutions will it make in covering 11 km?
    (a) 2800   (b) 4000   (c) 5500   (d) 7000

13. Find the circumference of a circle of diameter 21 cm.
    (a) 62 cm   (b) 64 cm   (c) 66 cm   (d) 68 cm

14. Find the area of a circle whose circumference is 52.8 cm.
    (a) 221.76 cm^2 (b) 220.76 cm^2 (c) 200.76 cm^2 (d) none of these.

15. A steel wire when bent in the form of a square, encloses an area of 121 sq. cm. The same wire is bent in the form of a circle. Find the area of the circle.
    (a) 111 cm^2 (b) 184 cm^2 (c) 154 cm^2 (d) 259 cm^2

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MCQ WORKSHEET-II
AREAS RELATED TO CIRCLES

MATHEMATICS

10THCBSE

1. A wire is looped in the form of a circle of radius 28 cm. It is rebent into a square form. Determine the length of the side of the square.
   (a) 42 cm   (b) 44 cm   (c) 46 cm   (d) 48 cm

2. A circular part, 42 m in diameter has a path 3.5 m wide running round it on the outside. Find the cost of gravelling the path at Rs. 4 per m^2.
   (a) Rs. 2800   (b) Rs. 2020   (c) Rs. 2002   (d) none of these

3. A road which is 7m wide surrounds a circular park whose circumference is 352 m. Find the area of the road.
   (a) 2618 m^2 (b) 2518 m^2 (c) 1618 m^2 (d) none of these

4. If the perimeter of a semicircular protractor is 36 cm, find the diameter.
   (a) 14 cm   (b) 16 cm   (c) 18 cm   (d) 12 cm

5. A bicycle wheel makes 5000 revolutions in moving 11 km. Find the diameter of the wheel.
   (a) 60 cm   (b) 70 cm   (c) 66 cm   (d) 68 cm

6. The diameter of the wheels of a bus is 140 cm. How many revolutions per minute must a wheel make in order to move a t a speed of 66km/hr?
   (a) 240   (b) 250   (c) 260   (d) 270

7. A paper is in the form of a rectangle ABCD in which AB = 18cm and BC = 14cm. A semicircular portion with BC as diameter is cut off. Find the area of the remaining paper (see in below figure).
   (a) 175 cm^2 (b) 165 cm^2 (c) 145 cm^2 (d) none of these
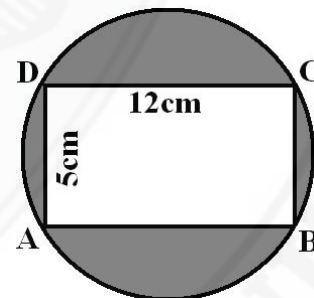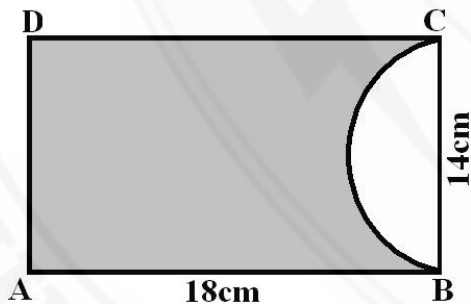
8. Find the area of the shaded region in the above sided figure. Take π = 3.14
   (a) 75 cm^2 (b) 72 cm^2 (c) 70 cm^2 (d) none of these

9. A square ABCD is inscribed in a circle of radius 'r'. Find the area of the square in sq. units.
   (a) 3r^2 (b) 2r^2 (c) 4r^2 (d) none of these

10. Find the area of a right-angled triangle, if the radius of its circumcircle is 2.5 cm and the altitude drawn to the hypotenuse is 2 cm long.
    (a) 5 cm^2 (b) 6 cm^2 (c) 7 cm^2 (d) none of these

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MCQ WORKSHEET-III
AREAS RELATED TO CIRCLES

MATHEMATICS
10TH CBSE

1. The perimeter of a sector of a circle of radius 5.6 cm is 27.2 cm. Find the area of the sector.
   (a) 44 cm^2 (b) 44.6 cm^2 (c) 44.8 cm^2 (d) none of these

2. The minute hand of a clock is 12 cm long. Find the area of the face of the clock described by the minute hand in 35 minutes.
   (a) 265 cm^2 (b) 266 cm^2 (c) 264 cm^2 (d) none of these

3. Find the area of the shaded region in the given figure, if Pr = 24 cm, PQ = 7 cm and O is the centre of the circle.
   (a) 164.54 cm^2 (b) 161.54 cm^2 (c) 162.54 cm^2 (d) none of these
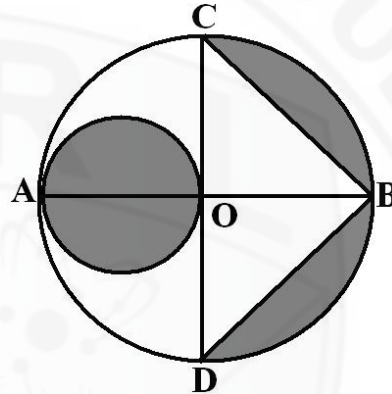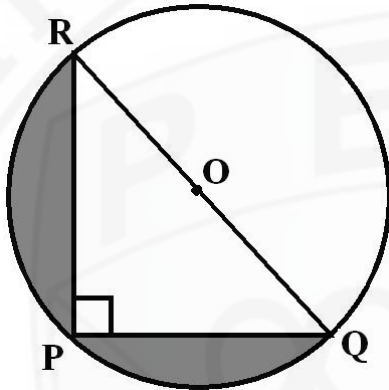
4. In the above-sided figure, AB is a diameter of a circle with centre O and OA = 7 cm. Find the area of the shaded region.
   (a) 64.5 cm^2 (b) 61.5 cm^2 (c) 66.5 cm^2 (d) none of these

5. A racetrack is in the form of a ring whose inner circumference is 352 m and outer circumference is 396 m. Find the width of the track.
   (a) 4 m (b) 6 m (c) 8 m (d) 7 m

6. The difference between the circumference and the radius of a circle is 37 cm. Find the area of the circle.
   (a) 111 cm^2 (b) 184 cm^2 (c) 154 cm^2 (d) 259 cm^2

7. The circumference of a circle exceeds its diameter by 16.8 cm. Find the circumference of the circle.
   (a) 24.64 cm (b) 26.64 cm (c) 28.64 cm (d) 22 cm

8. A copper wire when bent in the form of square encloses an area of 484 cm^2. The same wire is now bent in the form of a circle. Find the area of the circle.
   (a) 116 cm^2 (b) 166 cm^2 (c) 616 cm^2 (d) none of these

9. Find the area of the sector of a circle of radius 14 cm with central angle 45^0.
   (a) 76 cm^2 (b) 77 cm^2 (c) 66 cm^2 (d) none of these

10. A sector is cut from a circle of radius 21 cm. The angle of the sector is 150^0. Find the length of the arc.
    (a) 56 cm (b) 57 cm (c) 55 cm (d) 58 cm

1. The area of the sector of a circle of radius r and central angle θ, is

   A. ½ l.r
   B. $2\pi r^2\theta/720$
   C. $2\pi r\theta/360$
   D. $\pi r\theta/360$

2. An arc of a circle is of length 5π cm and the sector it bounds has an area of 20π cm^2. The radius of circle is

   A. 1 cm
   B. 5 cm
   C. 8 cm
   D. 10 cm

3. A sector is cut from a circle of circle of radius 21 cm. The angle of sector is 150º. The area of sector is

   A. 577.5 cm^2
   B. 288.2 cm^2
   C. 152 cm^2
   D. 155 m^2

4. A chord AB of a circle of radius 10 cm makes a right angle at the centre of the circle. The area of major segment is

   A. 210 cm^2
   B. 235.7 cm^2
   C. 185.5 cm^2
   D. 258.1 cm^2

5. A horse is tied to a pole with 56 m long string. The area of the field where the horse can graze is

   A. 2560 m^2
   B. 2464 m^2
   C. 9856 m^2
   D. 25600 m^2

6. The circumferences of two circles are in the ratio 2:3. The ratio of their areas is

   A. 4:9
   B. 2:3
   C. 7:9
   D. 4:10

7. Area enclosed between two concentric circles is 770 cm^2. If the radius of outer circle is 21 cm, then the radius of inner circle is

   A. 12 cm
   B. 13 cm
   C. 14 cm
   D. 15 cm

8. The perimeter of a semi-circular protector is 72 cm. Its diameter is

   A. 28 cm
   B. 14 cm
   C. 36 cm
   D. 24 cm

9. The minute hand of a clock is 21 cm long. The area described by it on the face of clock in 5 minutes is

   A. 115.5 cm^2
   B. 112.5 cm^2
   C. 211.5 cm^2
   D. 123.5 cm^2

10. The area of a circle circumscribing a square of area 64 cm^2 is

    A. 50.28 cm^2
    B. 25.5 cm^2
    C. 100.57 cm^2
    D. 75.48 cm^2

11. A pendulum swings through an angle of 30^0 and describes an arc 8.8 cm in length. Find the length of the pendulum.
    (a) 16 cm   (b) 16.5 cm   (c) 16.8 cm   (d) 17 cm

12. The minute hand of a clock is 15 cm long. Calculate the area swept by it in 20 minutes. Take $\pi=3.14$

(a) 116 cm^2 (b) 166 cm^2 (c) 616 cm^2 (d) none of these

13. A sector of 56^0, cut out from a circle, contains 17.6 cm^2. Find the radius of the circle.

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

14. A chord 10 cm long is drawn in a circle whose radius is $5\sqrt{2}$ cm. Find the areas of minor segment. Take $\pi=3.14$

(a) 16 cm^2 (b) 14.5 cm^2 (c) 14.25 cm^2 (d) none of these

15. The circumference of a circle is 88 cm. Find the area of the sector whose central angle is 72^0.

(a) 123 cm^2 (b) 123.5 cm^2 (c) 123.4 cm^2 (d) none of these