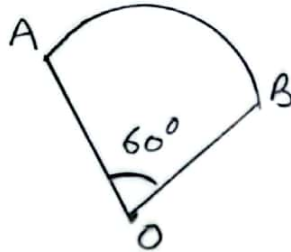


INTERNATIONAL INDIAN SCHOOL BURAI DAH  
MATHS-WORK SHEET  
CLASS X

CH: 12 AREA RELATED TO THE CIRCLES - 2025 .

**MCQ:**

1-In the given figure AOB is a sector of circle of radius 10,5 cm. Find the perimeter of the sector : ( Take  $\pi = 22/7$ )



- (a) 32 cm (b) 11 cm (c) 21 cm (d) 35 cm
- 2-The Area of the sector of a circle of radius 6 cm whose central angle is  $30^\circ$  is : ( Take  $\pi = 22/7$ )
- (a)  $9.42 \text{ cm}^2$  (b)  $8.42 \text{ cm}^2$  (c)  $7.42 \text{ cm}^2$  (d)  $9.52 \text{ cm}^2$
- 3-If  $\pi$  is taken as  $22/7$ , the distance (in meters) covered by a wheel of diameter 35 cm, in one revolution is:
- (a) 2.2 (b) 9.625 (c) 1.1 (d) 96.25
- 4-A wheel makes 1000 revolution in covering a distance of 88 km .Find the radius of the wheel :
- (a) 11 m (b) 12 m (c) 14 m (d) 10 m
- 5- A sector of  $120^\circ$  cut out from a circle, has an area of  $9\frac{3}{7} \text{ sq cm}$ . find the radius of the circle .
- (a) 1 cm (b) 3 cm (c) 1 m (d) 3 m
- 6-If a Chord of a circle of radius 14 cm makes an angle of  $90^\circ$  at the centre ,then find the area of major segment.

- (a)  $560 \text{ cm}^2$  (b)  $160 \text{ cm}^2$  (c)  $300 \text{ cm}^2$  (d) None of these

7-Area of sector p (in degrees) of a circle with radius R is

- (a)  $\frac{p}{180^\circ} \times 2\pi R$  (b)  $\frac{p}{360^\circ} \times 2\pi R$  (c)  $\frac{p}{180^\circ} \times \pi R^2$  (d)  $\frac{p}{720^\circ} \times 2\pi R^2$

8- If the difference between the circumference and the radius of a circle is 37 cm, then using  $\pi$

The radius of the circle (in cm) is:

- (a) 154 (b) 14 (c) 44 (d) 7

9- What is the area of a semi circle of diameter 'd'

- (a)  $\frac{1}{16}\pi d^2$  (b)  $\frac{1}{4}\pi d^2$  (c)  $\frac{1}{8}\pi d^2$  (d)  $\frac{1}{2}\pi d^2$

10-It is proposed to build a single circular park equal in area to the sum of areas of two circular parks of diameters 16 m and 12 m in a locality. The radius of the new park is :

- (a) 10 m (b) 20 m (c) 15 m (d) 24 m

**Assertion -Reason Questions**

1/2 .

The following questions consist of two statements -Assertion (A) and Reason(R) .Answer these questions selecting the appropriate option given below :

- (a) Both A and R true and R is the correct explanation for A.
- (b) Both A and R are true but R is not the correct explanation for A
- (c) A is true but R is false.
- (d) A is false but R is true .

1-**Assertion** : Sector is the region between the chord and its corresponding arc.

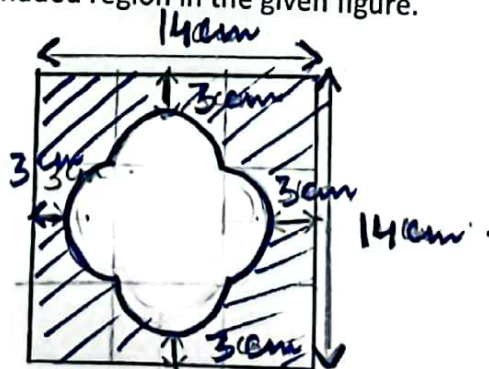
**Reason**: To define an arc we need at least 3 points .

2-**Assertion** : The area enclosed by a chord and the major arc is major segment.

**Reason**: If a circle is divided into three equal arcs ,then each is major arc .

### Subjective Type Question :

- 1-The circumference of a circle is 22 cm .Find the area of its quadrant (in  $cm^2$ )
- 2-Find the area of a quadrant of a circle whose circumference is 88 cm
- 3-if the area of a circle is equal to sum of the areas of two circles of diameters 10 cm and 24 cm ,then find the diameter of the larger circle (in cm).
- 4-If the area of circle is numerically equal to twice its circumference , then find the diameter of the circle.
- 5-Find the area of annulus whose inner and outer radii are 6 cm and 8 cm
- 6-The perimeter of a sheet of tin in the shape of quadrant of a circle is 12.5 cm , then find its area .
- 7-With vertices A , B and C of  $\triangle ABC$  as centres , arc are drawn with radii 14 cm and three portions of the triangle so obtained are removed. Find the total area removed from the triangle
- 8- Find the area of the unshaded region in the given figure.



9-Find the area of the minor segment of a circle of radius 5 cm formed by a chord subtending an angle of  $90^\circ$

10-Find the area of the segment shown in fig.if radius of the circle is 21 cm and  $\angle AOB = 120^\circ$

