CLASS 10

AREAS RELATED TO CIRCLE

SECTOR AND AREA OF SECTOR

EXERCISE

- Q.1 A sector of a circle of radius 4 cm contains an angle of 30^o. Find the area of the sector.
- **Q.2** A sector of a circle of radius 8 cm contains an angle of 135°. Find the area of the sector.
- **Q.3** The area of a sector of a circle of radius 2 cm is π cm². Find the angle contained by the sector.
- **Q.4** Find, in terms of π , the length of the arc that subtends an angle of 30° at the centre of a circle of radius 4 cm.
- **Q.5** Find the angle subtended at the centre of a circle of radius 5 cm by an arc of length $(5\pi/3)$ cm.
- **Q.6** An arc of length 20π cm subtends an angle of 144° at the centre of a circle. Find in terms of π , the radius of the circle.
- **Q.7** An arc of length 15 cm subtends an angle of 45^o at the centre of a circle. Find the radius of the circle.

- **Q.8** Find the angle subtended at the centre of a circle of radius 'a' by an arc of length $(a\pi/4)$ cm.
- **Q.9** In a circle of radius 21 cm, an arc subtends an angle of 60^o at the centre. Find:
 - (i) length of the arc
 - (ii) area of the sector formed by the arc

(iii) area of the segment formed by the corresponding chord of the arc.

Answer key

- **1.** cm²
- **2.** $24 \,\pi \, cm^2$
- **3.** 90°
- **4.** cm
- **5.** 60°
- **6.** 25 cm
- **7.** cm
- **8.** 45°
- **9.** (i) 22cm
 - (ii) 231 cm²

(iii) 40.05 cm²