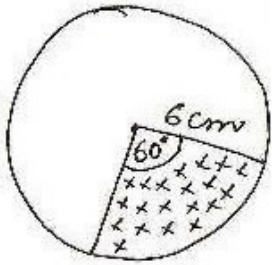
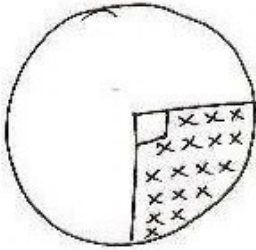


①



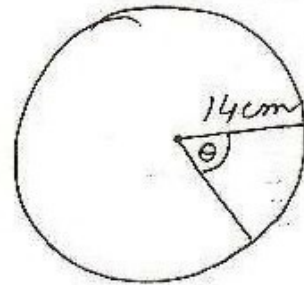
$$\begin{aligned} \text{area of sector} &= \pi r^2 \frac{\theta}{360} \\ &= \frac{22}{7} \times 6 \times 6 \times \frac{60}{360} \\ &= \frac{132}{7} \\ &= 18.85 \text{ cm}^2 \end{aligned}$$

②



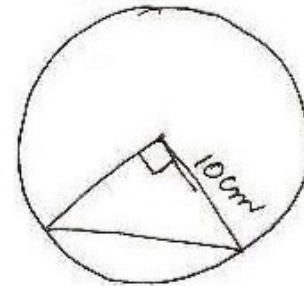
$$\begin{aligned} \text{circumference of } \odot &= 22 \text{ cm} \\ 2\pi r &= 22 \\ 2 \times \frac{22}{7} r &= 22 \\ \Rightarrow r &= \frac{7}{2} \text{ cm} \\ \text{area of quadrant} &= \frac{\pi r^2 \theta}{360} \\ &= \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times \frac{90}{360} \\ &= \frac{77}{8} \\ &= 9.625 \text{ cm}^2 \end{aligned}$$

③



$$\begin{aligned} \text{angle swept in 5 min.} &= 5 \times 6 \\ &= 30^\circ \\ \text{area of sector} &= \pi r^2 \frac{\theta}{360} \\ &= \frac{22}{7} \times 14 \times 14 \times \frac{30}{360} \\ &= \frac{154}{3} \\ &= 51.33 \text{ cm}^2 \end{aligned}$$

④



$$\begin{aligned} \text{area of minor segment} &= r^2 \left(\frac{\pi \theta}{360} - \frac{\sin \theta}{2} \right) \\ &= 10 \times 10 \left(\frac{3.14 \times 90}{360} - \frac{\sin 90}{2} \right) \\ &= 100 \left(\frac{1.57 - 1}{2} \right) \\ &= 50 \times 0.57 \\ &= 28.5 \text{ cm}^2 \\ \text{area of major sector} &= \frac{\pi r^2 \theta}{360} \\ &= \frac{3.14 \times 10 \times 10 \times 270}{360} \\ &= \frac{471}{2} \\ &= 235.5 \text{ cm}^2 \end{aligned}$$