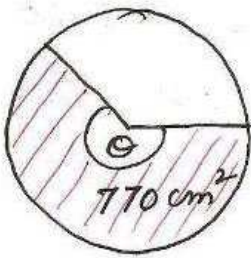


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area of sector = 770 cm^2

$$\pi r^2 \frac{\theta}{360} = 770$$

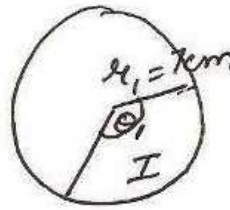
$$\frac{22}{7} \times r^2 \times \frac{120}{360} = 770$$

$$\begin{aligned} \Rightarrow r &= \sqrt{7 \times 7 \times 3 \times 3} \\ &= 7 \times 3 \\ &= 21 \text{ cm} \end{aligned}$$

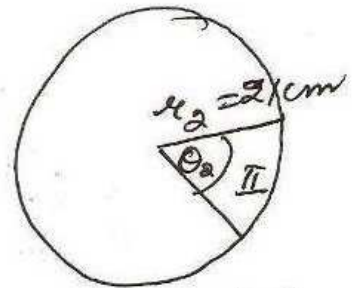
length of corresponding arc

$$\begin{aligned} \text{arc} &= 2\pi r \frac{\theta}{360} \\ &= 2 \times \frac{22}{7} \times 21 \times \frac{120}{360} \\ &= \frac{220}{3} \\ &= 73\frac{1}{3} \text{ cm}^2 \end{aligned}$$

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$$\begin{aligned} \theta_1 &= 120^\circ \\ r_1 &= 7 \text{ cm} \end{aligned}$$



$$\begin{aligned} \theta_2 &= 40^\circ \\ r_2 &= 21 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{area sector I} &= \pi r_1^2 \frac{\theta_1}{360} \\ &= \frac{22}{7} \times 7 \times 7 \times \frac{120}{360} \\ &= \frac{154}{3} \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{l of arc I} &= 2\pi r_1 \frac{\theta_1}{360} \\ &= 2 \times \frac{22}{7} \times 7 \times \frac{120}{360} \\ &= \frac{44}{3} \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{area sector II} &= \pi r_2^2 \frac{\theta_2}{360} \\ &= \frac{22}{7} \times 21 \times 21 \times \frac{40}{360} \\ &= 154 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{area of arc II} &= 2\pi r_2 \frac{\theta_2}{360} \\ &= 2 \times \frac{22}{7} \times 21 \times \frac{40}{360} \\ &= \frac{44}{3} \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{ar}(\text{arc I}) &\neq \text{ar}(\text{arc II}) \\ \text{l}(\text{arc I}) &= \text{l}(\text{arc II}) \end{aligned}$$