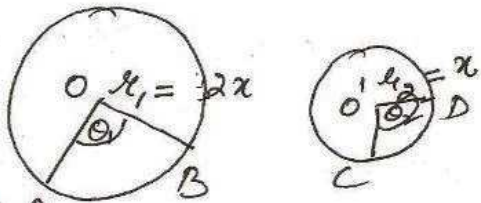


9



False

eg length of \widehat{AB} = length of \widehat{CD}

$$2\pi r_1 \frac{\theta_1}{360} = 2\pi r_2 \frac{\theta_2}{360}$$

$$2r \times \theta_1 = r \times \theta_2$$

$$\Rightarrow \theta_2 = 2\theta_1$$

$$\begin{aligned} \frac{ar(\widehat{AB})}{ar(\widehat{CD})} &= \frac{\pi r_1^2 \theta_1}{\pi r_2^2 \theta_2} \\ &= \frac{2r \times 2r \times \theta_1}{r \times r \times 2\theta_1} \\ &= \frac{2}{1} \end{aligned}$$

10 False

$$\begin{aligned} ar(\text{Sector } OAB) \\ = ar(\text{Sector } O'CD) \end{aligned}$$

$$\pi r_1^2 \frac{\theta_1}{360} = \pi r_2^2 \frac{\theta_2}{360}$$

$$2r \times 2r \times \theta_1 = r \times r \times \theta_2$$

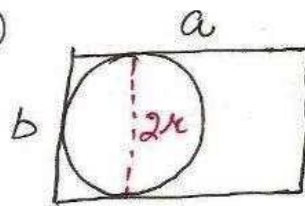
$$\Rightarrow 4\theta_1 = \theta_2$$

$$\frac{l \text{ of } \widehat{AB}}{l \text{ of } \widehat{CD}} = \frac{2\pi r_1 \frac{\theta_1}{360}}{2\pi r_2 \frac{\theta_2}{360}}$$

$$= \frac{2r \times \theta_1}{r \times 4\theta_1}$$

$$= \frac{1}{2}$$

11



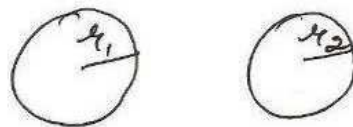
diameter of \odot = breadth of rect.

$$2r = b \text{ or } r = \frac{b}{2}$$

$$\begin{aligned} \text{area}(\odot) &= \pi r^2 \\ &= \pi \left(\frac{b}{2}\right)^2 \\ &= \frac{\pi b^2}{4} \text{ cm}^2 \end{aligned}$$

False

12



$$\begin{aligned} \text{circum of } (I \odot) \\ = \text{circum of } (II \odot) \end{aligned}$$

$$2\pi r_1 = 2\pi r_2$$

$$\Rightarrow r_1 = r_2 \text{ --- (1)}$$

$$\frac{A. \text{ of } I \odot}{A. \text{ of } II \odot} = \frac{\pi r_1^2}{\pi r_2^2}$$

$$= \frac{r_1^2}{r_2^2} \text{ (use i)}$$

\therefore True