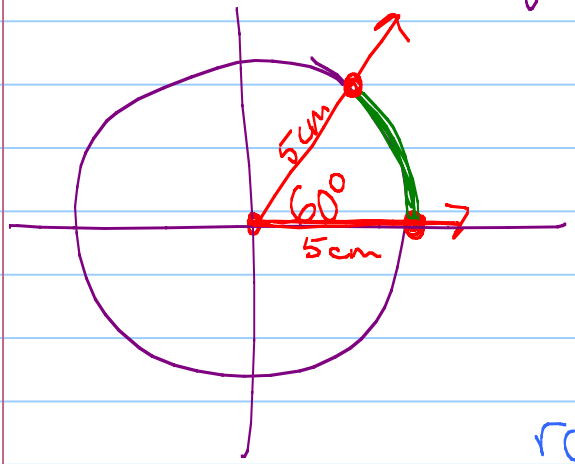
6.2 Arc Length

Note Title 19/11/2012



How long is the arc subtended (across from) by an angle of 60° in a circle of radius 5cm?

ratio of angles = ratio of arcs = area of sectors

$$\frac{\text{sector}}{\text{whole}} \quad \frac{60^\circ}{360^\circ} = \frac{a}{2\pi(5)} \leftarrow \text{circumference}$$

$$a = \frac{60^\circ \cdot 2\pi(5)}{360^\circ}$$

$$= 5.2\text{cm} \quad \text{OR} \quad \frac{5}{3}\pi \text{ cm}$$