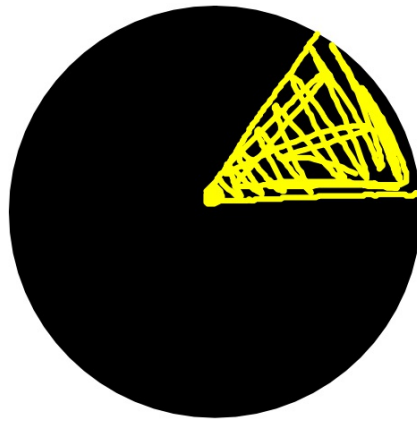


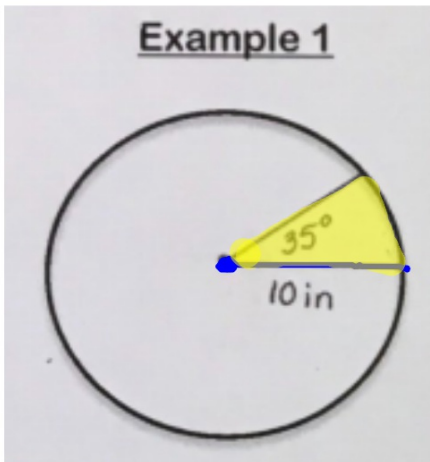
Area of a Sector

	Degrees	Radians
Area of Sector	$\pi r^2 \frac{c}{360}$	$r^2 \frac{c}{2}$

r: radius c: central angle



Find the Area of the Sector



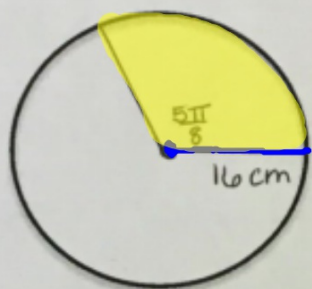
$$r = 10 \text{ in}$$
$$C = 35^\circ$$

Degrees	Radians
$\pi r^2 \frac{C}{360}$	$r^2 \frac{C}{2}$

$$A = \pi (10)^2 \left(\frac{35}{360} \right)$$

$$A = \frac{175\pi}{18} \text{ in}^2$$

Example 2



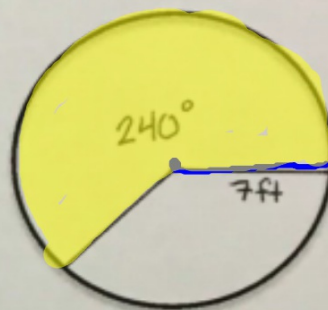
$$r = 16 \text{ cm}$$

$$C = \frac{5\pi}{8}$$

$$A = (16)^2 \left(\frac{\frac{5\pi}{8}}{2} \right)$$

$$A = 80\pi \text{ cm}^2$$

Example 3



$$r = 7 \text{ ft}$$

$$C = 240^\circ$$

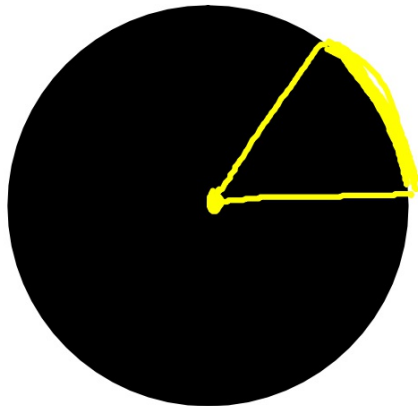
$$A = \pi (7)^2 \left(\frac{240}{360} \right)$$

$$A = \frac{98\pi}{3} \text{ ft}^2$$

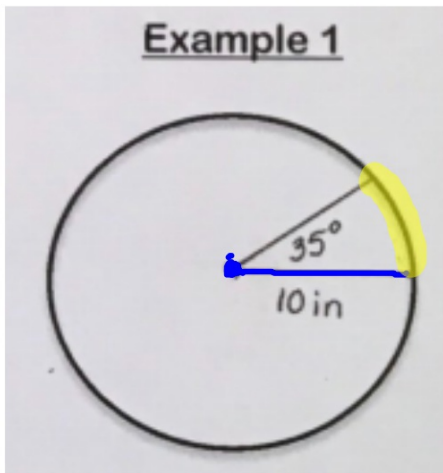
Arc Length

	Degrees	Radians
Arc Length	$cr \frac{\pi}{180}$	cr

r: radius c: central angle



Find the Length of the Arc



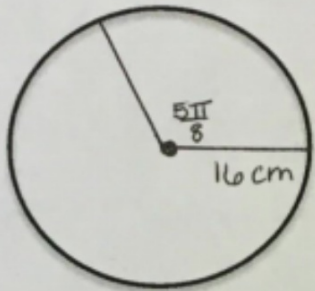
$$r = 10\text{ in}$$
$$C = 35^\circ$$

Degrees	Radians
$cr \frac{\pi}{180}$	cr

$$L = (35)(10) \frac{\pi}{180}$$

$$L = \frac{35\pi}{18} \text{ in}$$

Example 2

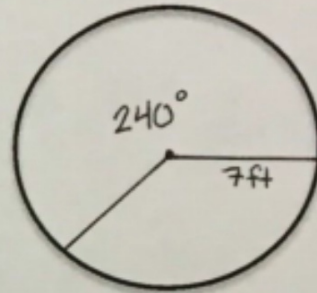


$$r = 16 \text{ cm}$$
$$C = \frac{5\pi}{8}$$

$$L = \left(\frac{5\pi}{8}\right) 16$$

$$L = 10\pi \text{ cm}$$

Example 3



$$r = 7 \text{ ft}$$
$$C = 240^\circ$$

$$L = (240)(7) \frac{\pi}{180}$$

$$L = \frac{28\pi}{3} \text{ ft}$$

Homework is Page 6.8 in Packet