

Sec. 4.1  
Pg. 173

## Arc length

$$a = \theta r$$

↑ central angle (radians)      ↖ radius

example.

$$\theta = 130^\circ$$

$$r = 6.7 \text{ mm}$$

$$\frac{130 \pi}{180} = \frac{13\pi}{18}$$

$$a = \left(\frac{13\pi}{18}\right)(6.7)$$

$$a = 15.2 \text{ mm}$$

or Old Course

$$\frac{\theta}{360} \cdot 2\pi r$$

$$\frac{130^\circ}{360^\circ} \cdot 2\pi(6.7) = 15.2 \text{ mm}$$