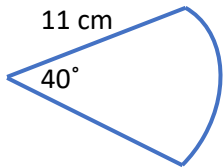


Examples: Find the arc length of the sector below.



$$\text{Arc length} = \frac{\theta}{360} \times 2\pi r$$

$$\text{Arc length} = \frac{40}{360} \times 2\pi \times 11$$

$$\text{Arc length} = 7.6794 \dots$$

$$\text{Arc length} = 7.68 \text{ cm}$$

A sector has a radius of 5 cm and an arc length of 9.2 cm. Find the angle.

$$\text{Arc length} = \frac{\theta}{360} \times 2\pi r$$

$$9.2 = \frac{\theta}{360} \times 2\pi \times 5$$

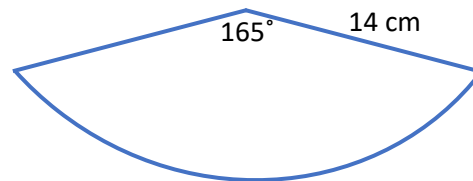
$$9.2 \times 360 = \theta \times 2\pi \times 5$$

$$\frac{9.2 \times 360}{2\pi \times 5} = \theta$$

$$\theta = 105.4^\circ$$

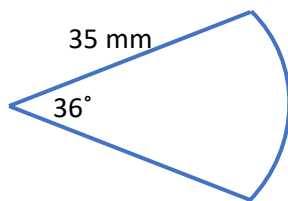
Remember: Start by writing down the formula you need. You can then substitute or solve from there.

Q1) Calculate the arc length of



Q2) Calculate the arc length of the following sector: (Non Calc)

Leave your answer in terms of π .



Q3) A sector has an arc length of 28 cm and a radius of 15 cm. Calculate the angle in the sector.

Q4) A sector with an angle of 250° has an arc length of 2 m. Find the radius, giving your answer to the nearest cm.