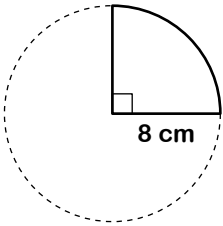


The Formulae for Area of Sectors and Arc Lengths



Derive the formula for the area of a sector by filling in the missing blanks.
Leave any answers in terms of π .

Area of the sector = $\frac{\square}{\square} \times \pi r^2$

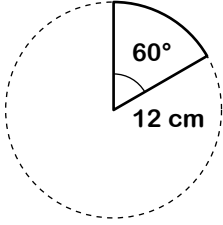


8 cm

= $\frac{\square}{\square} \times \pi \times \square$

= \square cm²

Area of the sector = $\frac{\square}{\square} \times \pi r^2$



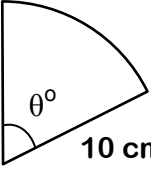
60°

12 cm

= $\frac{\square}{\square} \times \pi \times \square$

= \square cm²

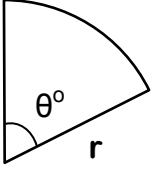
Area of the sector = $\frac{\square}{\square} \times \square$



θ°

10 cm

Area of any sector = $\frac{\square}{\square} \times \square$

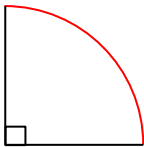


θ°

r

Derive the formula for arc length (shown in red) by filling in the missing blanks.

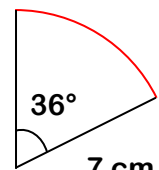
Arc length = $\frac{\square}{\square} \times \square$



8 cm

= \square cm

Arc length = $\frac{\square}{\square} \times \square$

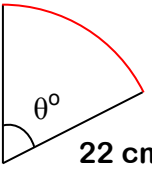


36°

7 cm

= \square cm

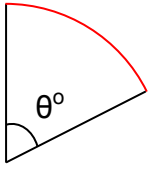
Arc length = $\frac{\square}{\square} \times \square$



θ°

22 cm

Any Arc length = $\frac{\square}{\square} \times \square$



θ°

r