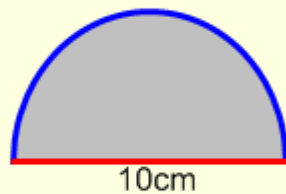


Arc Lengths and Sector Areas

Arc Length

An arc is part of the circumference. We don't have a full circle, we only have a fraction of a circle

The circumference of a circle = $2\pi r$

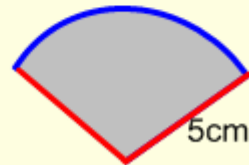


This is half a circle, so we have half of $2\pi r$

$$\frac{1}{2} \times 2 \times \pi \times 5$$

Here we have 100° of the circle:

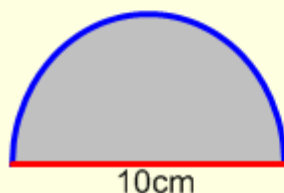
$$\frac{100}{360} \times 2 \times \pi \times 5$$



Sector Area

A sector is part of the circle (like a slice of pizza). We don't have a full circle, we only have a fraction of a circle

The area of a circle = πr^2



This is half a circle, so we have half of πr^2

$$\frac{1}{2} \times \pi \times 5^2$$

Here we have 100° of the circle:

$$\frac{100}{360} \times \pi \times 5^2$$

