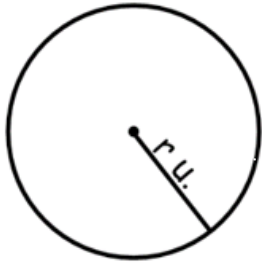


## G7B-3 Notes- Areas of Circles and Sectors



The area of a circle is radius<sup>2</sup>π.

$$A = r^2\pi$$

don't forget units!

Example calculations:

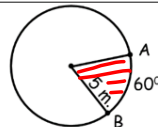
NOT THE DIAMETER

Radius	Area
5 m.	$5^2\pi = 25\pi$ sq. m.
1 yd.	$1^2\pi = 1\pi$ sq. yd.
3 ft.	$3^2\pi = 9\pi$ sq. ft.

A sector is a portion of the area of the circle.

Example:

Find the area of the sector bordered by  $\overline{AB}$ .



Step 1:  
Find the area of the circle.

$$A = 5^2\pi = 25\pi \text{ sq. m.}$$

Step 2: Find the fraction of the circle made up of the sector.

$$\frac{60^\circ}{360^\circ} = \frac{1}{6}$$

Step 3: Multiply the area by the fraction.

$$\begin{aligned} \text{Area of the sector} &= \frac{1}{6}(25\pi) \\ &= \frac{25\pi}{6} \text{ sq. m.} \end{aligned}$$