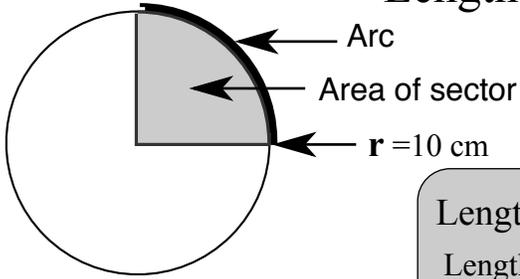


# MathFLIX CHALLENGE

## Length of an Arc & Area of a Sector



We created the following table to help you more easily understand arcs and sectors. Use the measurements of this illustrated circle to complete the table.

Circumference = \_\_\_\_\_

Area of circle = \_\_\_\_\_

$$\text{Length of Arc} = \text{Circumference of circle} \cdot \frac{\text{angle measure}}{\text{total degrees in circle}}$$

$$\text{Length of Arc} = 2\pi r \left( \frac{c}{360} \right)$$

$$\text{Area of a sector} = \text{Area of circle} \cdot \frac{\text{angle measure}}{\text{total degrees in circle}}$$

$$\text{Area of a sector} = \pi r^2 \left( \frac{c}{360} \right)$$

Time	Clock hands	Angle	Fraction	Simplified Fraction	Decimal	Arc Length	Area of Sector
12:30		180°	$\frac{180^\circ}{360^\circ}$	$\frac{1}{2}$	.5	31.4 cm	157 sq cm
3:00			$\frac{\quad}{360^\circ}$				
9:00			$\frac{\quad}{360^\circ}$				
1:00			$\frac{\quad}{360^\circ}$				
2:00							
4:00							
5:00							
		72°					
		200°					
		354°					