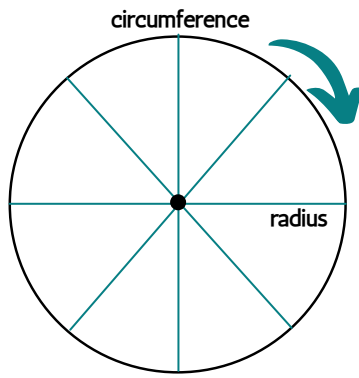


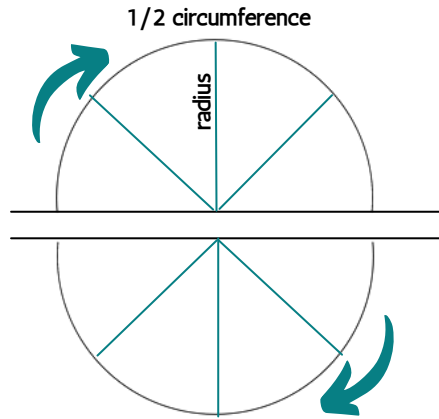
# CIRCLES - AREA FORMULA

Area of Circle =  $\pi \times \text{radius} \times \text{radius}$

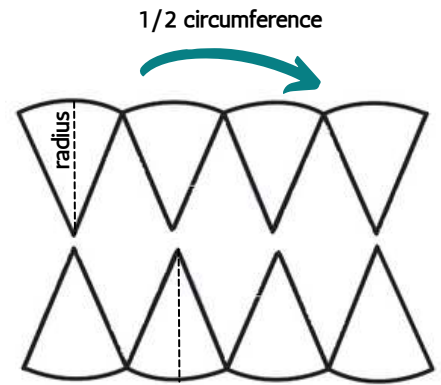
**How to find the formula for the area of a circle.**



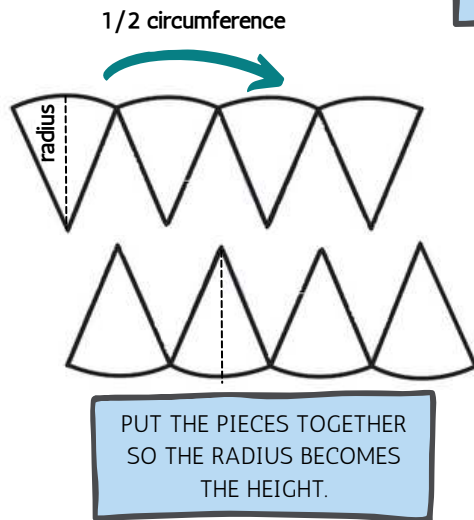
THE **CIRCUMFERENCE** OF A CIRCLE IS THE DISTANCE AROUND IT. THE **AREA** IS THE SPACE INSIDE THE CIRCLE.



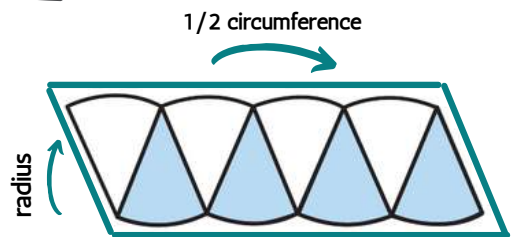
THE FORMULA THAT HELPS US FIND THE AREA CAN BE FOUND BY CUTTING THE CIRCLE IN HALF.



SEPERATE THE PIECES SO THE CIRCUMFERENCE LOOKS LIKE A STRAIGHT LINE.



PUT THE PIECES TOGETHER SO THE RADIUS BECOMES THE HEIGHT.



WE CREATED A PARALLELOGRAM. BASE = 1/2 CIRCUMFERENCE AND HEIGHT = RADIUS.

THE AREA OF PARALLELOGRAM CAN BE FOUND BY MULTIPLYING THE BASE AND HEIGHT (BASE  $\times$  HEIGHT)

**What does all this mean?**

Base  $\times$  Height

Area of a circle =  $1/2 \times \text{circumference} \times \text{radius}$

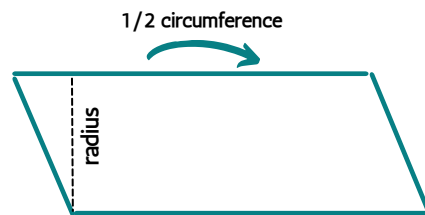
circumference =  $2 \times \text{radius} \times \pi$

Area of a circle =  $1/2 \times 2 \times \text{radius} \times \pi \times \text{radius}$

**if you combine like terms you will get:**

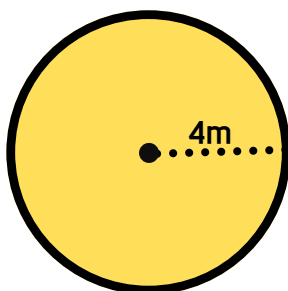
Area of circle =  $\pi \times \text{radius}^2$  or  $A = \pi r^2$

$\pi = 3.141592653589...$  or approx. 3.14

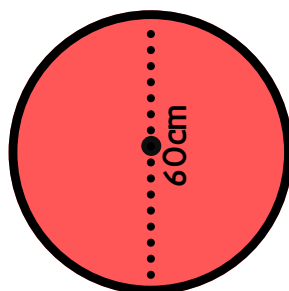


Find the missing circumference, diameter or radius for each circle :-

1.



2.



3.

