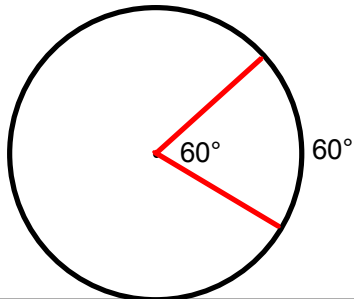


## Circle Unit Formulas

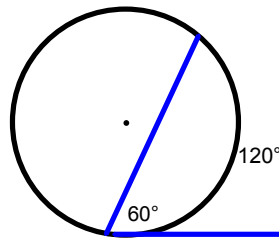
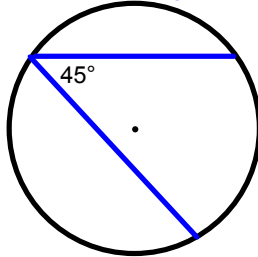
### Central Angles



Central Angle = vertex at **CENTER** of circle

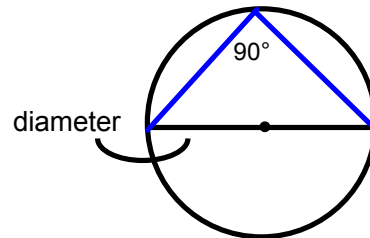
$$m \text{ Central Angles} = m \text{ Arc}$$

### Inscribed Angles

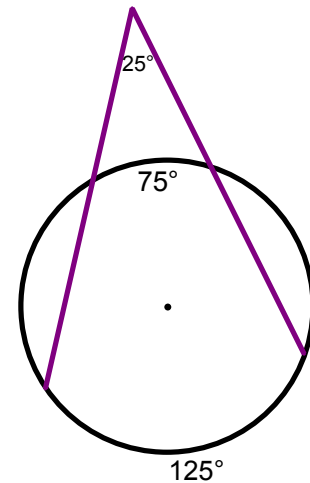
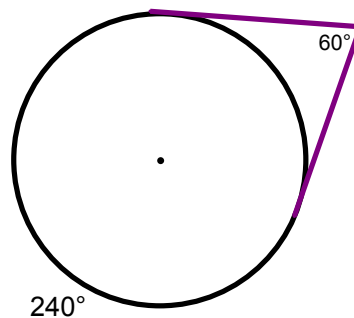
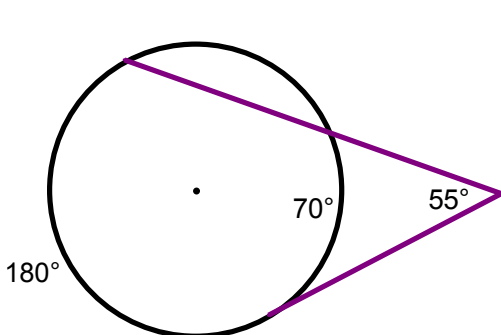


Inscribed Angle = vertex **ON** circle

$$m \text{ Inscribed Angles} = \frac{1}{2} m \text{ Arc}$$



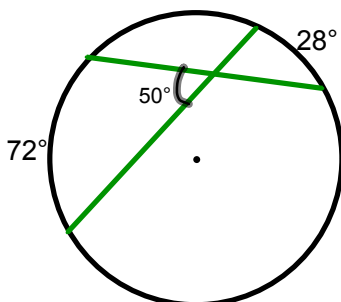
### Exterior Angles



Exterior Angle = vertex **OUTSIDE** circle

$$m \text{ Exterior Angle} = \frac{\text{Large Arc} - \text{Small Arc}}{2}$$

### Interior Angles



Interior Angle = vertex **INSIDE** circle (not at center)

$$m \text{ Interior Angle} = \frac{\text{Large Arc} + \text{Small Arc}}{2}$$

\*Hint\*: the CROSS in the circle looks like a "+" sign

## Length and Areas

Circumference of Circle =  $2\pi r = d\pi$ 

Length of Arc :

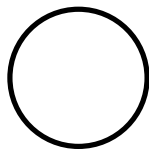
$$\frac{\text{Part}}{\text{Whole}} = \frac{n^\circ}{360^\circ} = \frac{l}{2\pi r} = \frac{l}{d\pi}$$

Area of a Circle =  $\pi r^2$ 

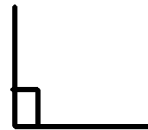
Area of Sector:

$$\frac{\text{Part}}{\text{Whole}} = \frac{n^\circ}{360^\circ} = \frac{x}{\pi r^2}$$

## Remember...



= 360°



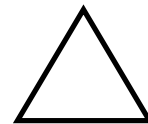
= 90°



= 180°



= 180°



= 180°

## IX

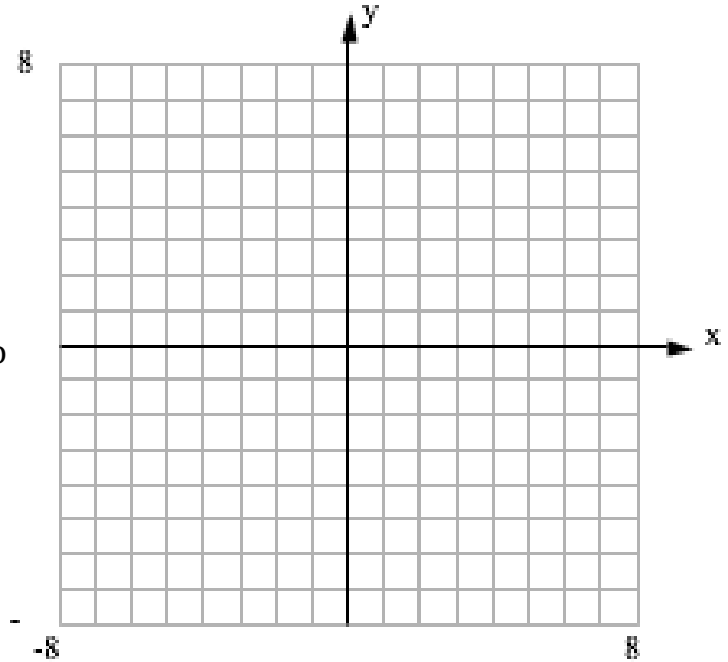
Given the circle with the equation

$$x^2 + y^2 = 49$$

31) Graph the circle.

32) Find the area of the circle. Round to the nearest hundredth.

33) List all the intercepts.



## X

Given Circle Z, if  $ZA = 15$ ,  
and the radius of the circle = 17,

35) Find the measure of  $MH$ .

