



# Math Virtual Learning

# Geometry

May 5, 2020



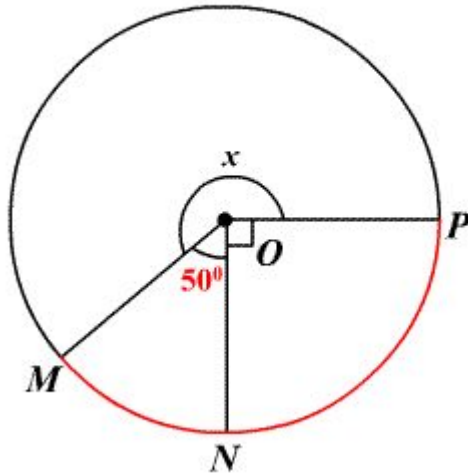
# Geometry

## Lesson: May 6, 2020

Objective/Learning Target:  
Find the measure of inscribed angles

## Bell Ringer: Solve for the central angle “x”

Find the value of  $x$ .



## Bell Ringer Answer:

The sum of the measures of the central angles of a circle with no interior points in common is  $360^\circ$ . So,

$$m\angle MON + m\angle NOP + m\angle POM = 360^\circ$$

$$50^\circ + 90^\circ + x = 360^\circ$$

Simplify.

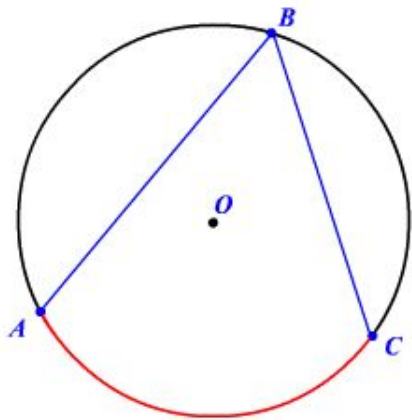
$$140^\circ + x = 360^\circ$$

Subtract  $140^\circ$  from each side.

$$x = 220^\circ$$

# Inscribed Angles

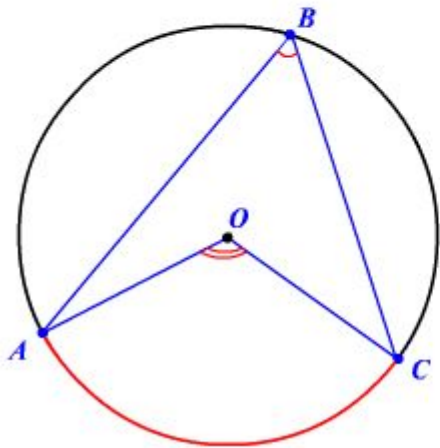
An inscribed angle in a **circle** is formed by two chords that have a common end point on the circle. This common end point is the vertex of the angle.



## Inscribed Angle Theorem:

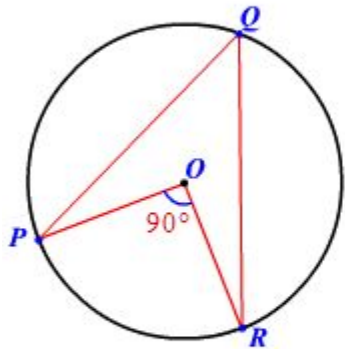
The measure of an inscribed angle is half the measure of the intercepted arc.

That is,  $m\angle ABC = \frac{1}{2}m\angle AOC$ .



### Example 1:

Find the measure of the inscribed angle  $\angle PQR$ .



By the inscribed angle theorem, the measure of an inscribed angle is half the measure of the intercepted arc.

The measure of the central angle  $\angle POR$  of the intercepted arc  $\widehat{PR}$  is  $90^\circ$ .

### Example 1 cont..

The measure of the central angle  $\angle POR$  of the intercepted arc  $\widehat{PR}$  is  $90^\circ$ .

Therefore,

$$\begin{aligned} m\angle PQR &= \frac{1}{2}m\angle POR \\ &= \frac{1}{2}(90^\circ) \\ &= 45^\circ \end{aligned}$$



## Practice

Click on the link below to practice and to check your understanding!

[Inscribed Angles Practice \(With Answers\)](#)