

### **Math Virtual Learning**

# **Geometry/Honors Geometry**

May 5, 2020



#### Geometry Lesson: May 5, 2020

#### Objective/Learning Target: Find the measure of central angles



## Bell Ringer: Find the measure of missing angles a, b, c, d, and e.





#### Bell Ringer Answer: The measure of angle a is 15 degrees. The measure of angle b is 90 degrees. The measure of angle c is 75 degrees. The measure of angle d is 15 degrees. The measure of angle e is 90 degrees.

Let's Get Started: Go through the following slides and try the example problems.



Term	Definition	Picture
Central Angle	An angle whose vertex is the center of the circle.	$\angle A \\ \bigcirc C \\ P \\ \angle APC$
		$\angle APC$



Term	Definition	Picture
Minor Arc	Arc of a circle that is less than 180 degrees.	$\frac{A}{P}$ Two letters: $\widehat{AC}$



Term	Definition	Picture
Major Arc	Arc of a circle that is more than 180 degrees.	
		3 letters: $\widehat{ABC}$



Term	Definition	Picture
Semicircle	Arc of a circle that is exactly 180 degrees.	$A$ $P$ $B$ $C$ 3 letters: $\widehat{ABC}$



### Key Property:

The measure of an arc is the measure of its central angle.





Example Problem: Segments MQ and NR are diameters of circle O. Determine whether the given arc is a minor arc, major arc, or semicircle. Then find the measure of the arc.

Arc RQ Answer: Minor Arc (because it is less than 90 degrees) 73 degrees (because its central angle is 73 degrees)

Arc MNQ Answer: Semicircle (because MQ is a diameter) 180 degrees (diameter cuts the circle in half)





Try the next practice problems on your own! Segments MQ and NR are diameters of circle O. Determine whether the given arc is a minor arc, major arc, or semicircle. Then find the measure of the arc.

- 1) Arc NP
- 2) Arc MRP
- 3) Arc NMR





#### Answer Key: Here you will find the answers to the previous four questions. Check your answers below.

- 1) Minor Arc; 81 degrees
- 2) Major Arc; 206 degrees
- 3) Semicircle; 180 degrees



#### **Additional Resources:**

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

#### Arcs and Central Angles Practice