Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Day 1 – Circle Vocabulary and Central Angles**

|  |  |  |
| --- | --- | --- |
| **Circle** | set of all points equidistantfrom a given point calledthe center of the circle |  |
| **Chord**  | a segment whose endpoints are on the circle |  |
| **Diameter** | distance across the circle through its \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| **Radius** | distance from the center to point on circle |  |
| **Secant**  | a line that intersects the circle at exactly \_\_\_\_\_\_\_\_\_\_ points |  |
| **Tangent** | a \_\_\_\_\_\_\_\_\_\_ that intersects the circle exactly ONE time |  |
| **Point of Tangency** | where the tangent line intersects the circle |  |

Circles have \_\_\_\_\_\_\_ degrees. Semicircles have \_\_\_\_\_\_\_ degrees.

**REMEMBER:** Vertical Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Linear Pairs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Practice:** Tell whether the line or segment is best described as a chord, a secant, a tangent, a diameter, or a radius—be specific!

 a.  b. 

 c.  d. 

 e.  g. 

 **Arcs & Central Angles**

An **arc** is an unbroken part of a circle consisting of two points called the endpoints and all the points on the circle between them.

|  |  |  |  |
| --- | --- | --- | --- |
| **Arc or Angle** | **Definition** | **Measure** | **Picture** |
| Minor Arc | An arc whose points are on or in the interior of a central angle. Minor arcs are less than 180 and only use two letters to name them. | The measure of a minor arc is equal to the measure of the central angle. |  |
| Major Arc | An arc whose endpoints are on or in the exterior of a central angle. Major arcs are between 180 and 360. Three letters are used to name a major arc. | The measure of a major arc is equal to 360 minus the measure of its central angle or minor arc. |  |
| Semicircle | An arc whose endpoints lie on a diameter. Semicircles are named using three letters. | The measure of a semicircle is 180.  |  |
| Central Angle | An angle whose vertex is the center of the circle. | The measure of a central angle is equal to the measure of its minor arc. |  |
| **Name** | **Theorem** | **Hypothesis** | **Conclusion** |
| Arc Addition Postulate | The measure of an arc formed by two adjacent arcs is the sum of the measures of the two arcs.  |  |  |

**Practice**

**Example:** Identify the following arcs are minor, major, or semicircle.



**Example:** Find the measure of the following:

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**Example:** Find the measure of the following:

****

**Example:** Find the value of x. Then find the measure of arc BC.