**GEOMETRY NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10.3 ARCS AND CHORDS NOTES DAY 1**

The endpoints of a chord are also the endpoints of an arc. For any circle, two \_\_\_\_\_\_\_\_\_\_\_arcs are \_\_\_\_\_\_\_\_\_\_\_\_, if and only if their corresponding \_\_\_\_\_\_\_\_\_\_\_\_\_ are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



The chords of adjacent arcs can form a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Quadrilateral ABCD is an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ polygon because all of its vertices lie on the circle.
Circle E is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about the polygon because it contains all the vertices of the polygon.

Let’s see some examples:

In a circle, if a diameter (or radius) is perpendicular to a chord, then it \_\_\_\_\_\_\_\_\_\_\_\_ the chord and its arc.



Example 1: Given the information below, find CX, OX, XB, and the $m\hat{CD}$.

 CX =

 OX =

 XB =

 $m\hat{CD}=$

 (*hint: think SOHCAHTOA*)

In a circle or in congruent circles, two chords are congruent if and only if they are

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Example 2: Chords $\overbar{AC}and \overbar{DF}$ are equidistant from the center. If the radius of Circle G is 26, find AC and DE.

