## ARCS AND CHORDS

Theorem - In a circle (or congruent circles), two minor arcs are congruent if and only if their corresponding chords are congruent.
a) Which two chords are congruent? $\qquad$
b) What are the measures of their arcs? $\qquad$


Theorem - In a circle, if a diameter (or radius) is perpendicular to a chord, then it bisects the chord and its arc.
$\mathrm{AD} \perp \mathrm{BC}, \mathrm{AE}=7.5$, and the radius is 8.5 . Find the following.
$\mathrm{ED}=$ $\qquad$ $E B=$ $\qquad$
$A C=$ $\qquad$ EC = $\qquad$
$A B=$ $\qquad$
$B C=$ $\qquad$


Theorem - In a circle (or congruent circles), two chords are congruent if and only if they are equidistant from the center.

Find the values of $x$ and $y$.
$x=$ $\qquad$


## ARCS AND CHORDS

Theorem - In a circle (or congruent circles), two minor arcs are congruent if and only if their corresponding chords are congruent.
a) Which two chords are congruent? $\qquad$
b) What are the measures of their arcs? $\qquad$


Theorem - In a circle, if a diameter (or radius) is perpendicular to a chord, then it bisects the chord and its arc.
$A D \perp B C, A E=7.5$, and the radius is 8.5 . Find the following.
$E D=$ $\qquad$ $\mathrm{EB}=$ $\qquad$
$A C=$ $\qquad$ $\mathrm{EC}=$ $\qquad$
$A B=$ $\qquad$
$B C=$ $\qquad$


Theorem - In a circle (or congruent circles), two chords are congruent if and only if they are equidistant from the center.

Find the values of $x$ and $y$.
$x=$ $\qquad$
$y=$ $\qquad$


