

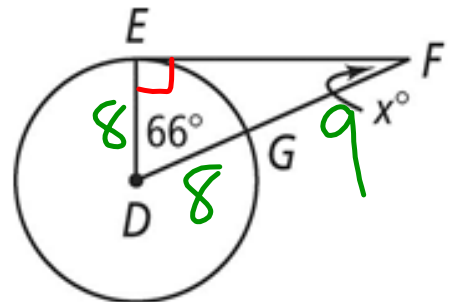
# Geometry

Chapter 12

Test Review

1.  $\overline{EF}$  is tangent to  $\odot D$ . What is the value of  $x$ ?

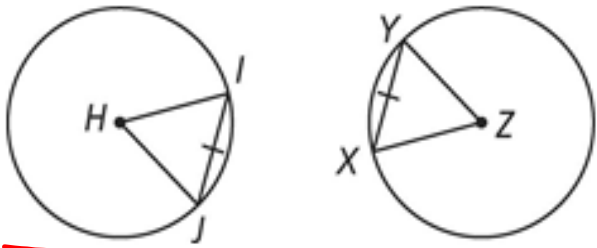
2. If  $DG = 8$  and  $GF = 9$ , what is the length of  $EF$ ?



$$\begin{array}{r} 180 \\ -156 \\ \hline x = 24 \end{array} \quad \begin{array}{r} 90 \\ +66 \\ \hline 156 \end{array}$$

$$\begin{aligned} 8^2 + EF^2 &= 17^2 \\ -64 + EF^2 &= 289 \\ \hline \sqrt{EF^2} &= \sqrt{225} \\ EF &= 15 \end{aligned}$$

4. The circles below are congruent. Other than the given, what can you conclude are congruent?



$$\overline{IJ} \cong \overline{XY}$$

$$\odot H \cong \odot Z$$

$$\widehat{IJ} \cong \widehat{XY}$$

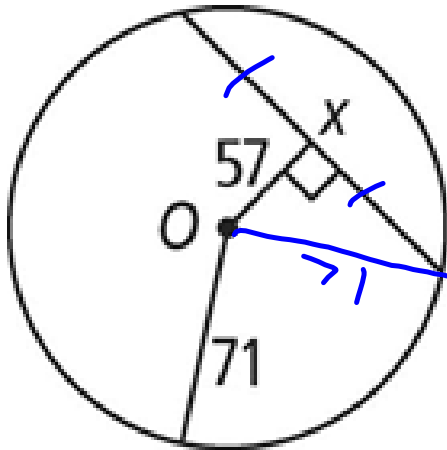
$$\angle Z \cong \angle H$$

$$\overline{HI} \cong \overline{HJ} \cong \overline{YZ} \cong \overline{XZ}$$

$$\triangle HIJ \cong \triangle ZYX$$

$$\angle I \cong \angle J \cong \angle Y \cong \angle X$$

6.



$$57^2 + b^2 = 71^2$$

$$3249 + b^2 = 5041$$

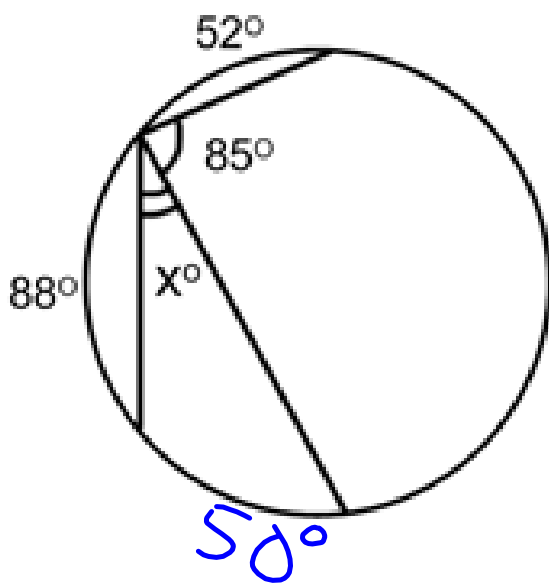
$$\begin{array}{r} -3249 \\ \hline \sqrt{b^2} = \sqrt{1792} \end{array}$$

$$b = 42.33$$

$$x = 26$$

$$x = 84.66$$

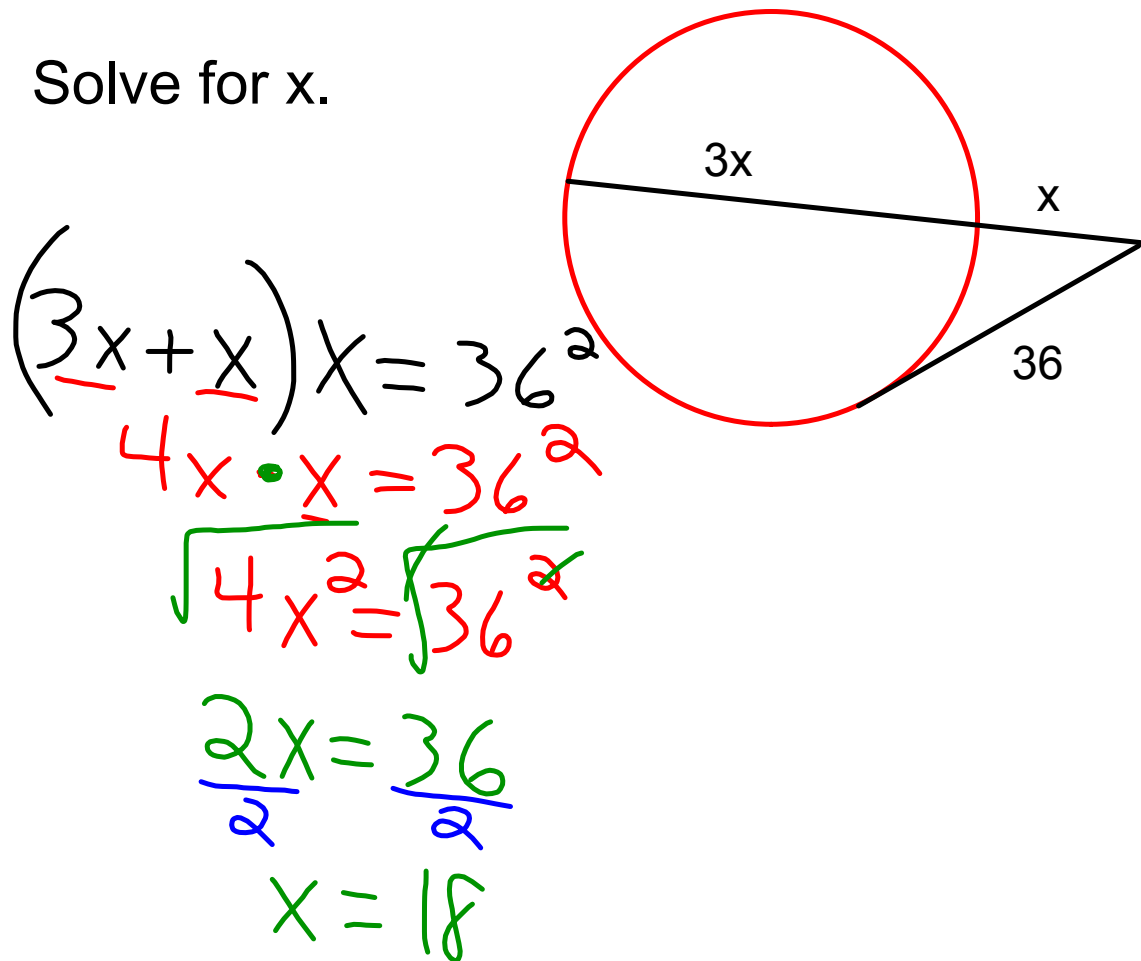
8. Find the value of x.



$$\begin{array}{r}
 85 \\
 \times 2 \\
 \hline
 170
 \end{array}
 + 52 + 88 = \frac{360}{50}$$

$$x = 25$$

Solve for x.



$$(3x + x) \cdot x = 36^2$$

$$4x \cdot x = 36^2$$

$$\sqrt{4x^2} = \sqrt{36^2}$$

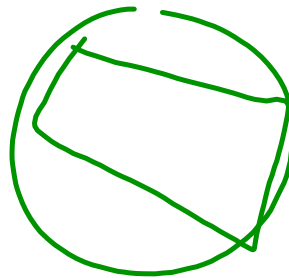
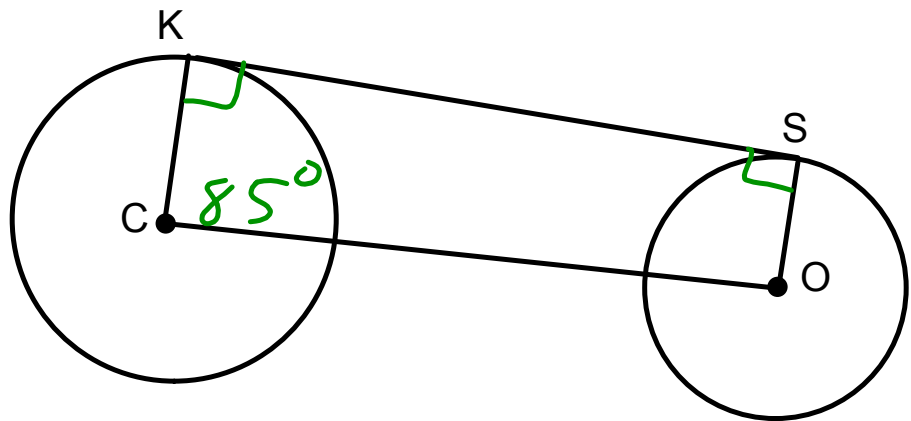
$$\frac{2x}{2} = \frac{36}{2}$$

$$x = 18$$

SK is tangent to both circles,  $m\angle C = 85$ . Find  $m\angle O$ .

$$\begin{array}{r} 90 \\ 90 \\ + 85 \\ \hline 265 \end{array}$$

$$\begin{array}{r} 360 \\ - 265 \\ \hline 95 \end{array}$$

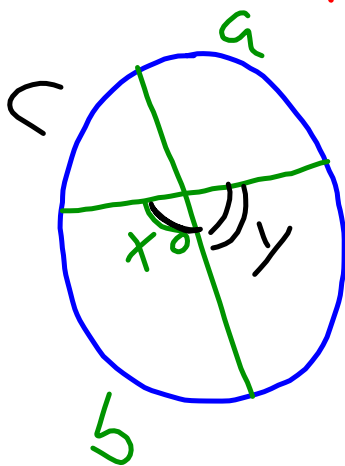


$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$(x - h)^2 + (y - k)^2 = r^2$$

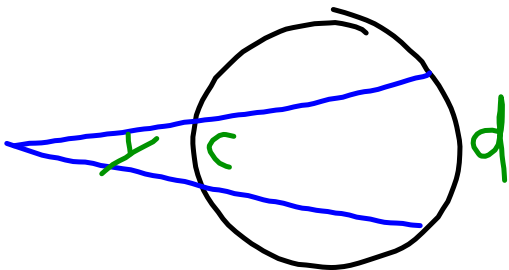
$(h, k) \rightarrow$  center

$r \rightarrow$  radius



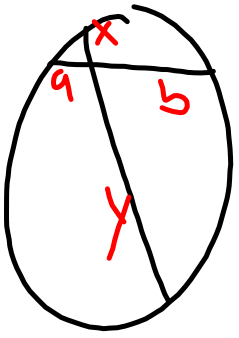
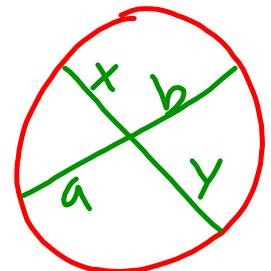
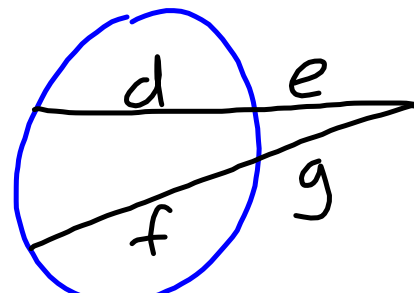
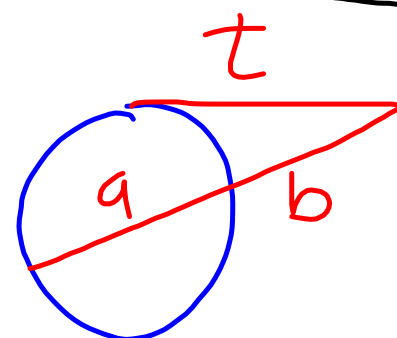
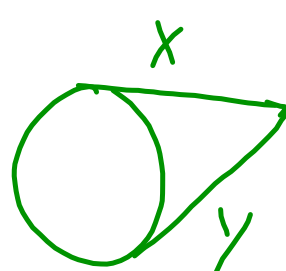
$$x = \frac{1}{2}(a + b)$$

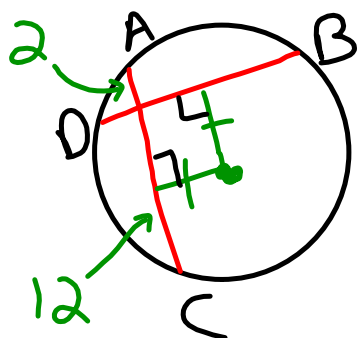
$$y = \frac{1}{2}(c + d)$$



$$y = \frac{1}{2}(d - c)$$



  $a \cdot b = x \cdot y$	 $e(d+e) = g(g+f)$
 $b(a+b) = t^2$	 $x = y$



Find DB.

$$DB = AC$$

$$DB = 2 + 12$$

$$DB = 14$$