

**Geometry**  
**Unit: Circles**  
**Section: Special Segments in Circles**

**Review Worksheet KEY**

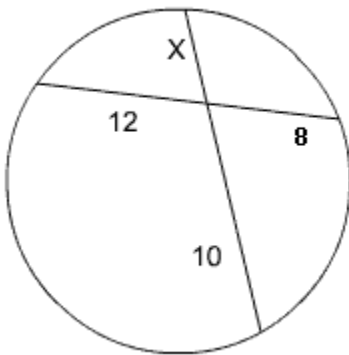
1) If the radius of a circle is 4 inches, what is the diameter?

$$d = 2r = 2(4) = 8 \text{ inches}$$

2) If the diameter of a circle is 17 feet, what is the radius?

$$r = \frac{1}{2}d = \frac{1}{2}(17) = 8.5 \text{ feet}$$

3) Find the value of  $x$  in the figure below.

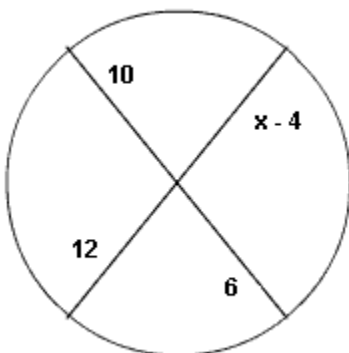


$$12(8) = 10(x)$$

$$96 = 10x$$

$$9.6 = x$$

4) Find the value of  $x$  in the figure below.



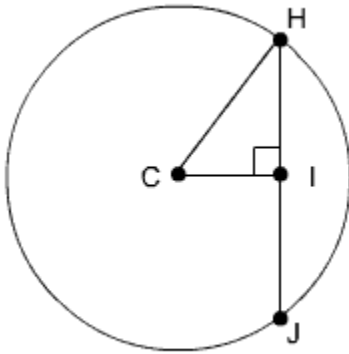
$$10(6) = 12(x - 4)$$

$$60 = 12x - 48$$

$$108 = 12x$$

$$9 = x$$

5) Find the length of CI in the figure below. HJ = 32 and CH = 20.



$$HI = \frac{1}{2}HJ = \frac{1}{2}(32) = 16$$

$$CI^2 + HI^2 = CH^2$$

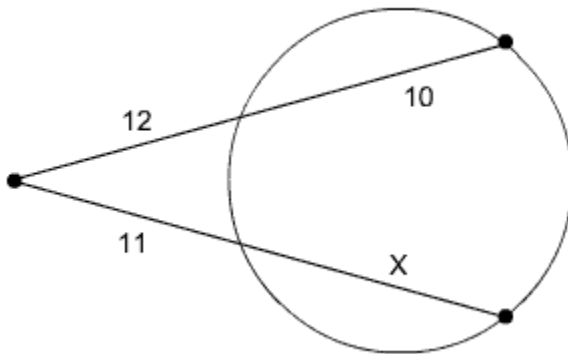
$$CI^2 + 16^2 = 20^2$$

$$CI^2 + 256 = 400$$

$$CI^2 = 144$$

$$CI = 12$$

6) Find the value of x in the figure below.



$$12(12 + 10) = 11(11 + x)$$

$$144 + 120 = 121 + 11x$$

$$264 = 121 + 11x$$

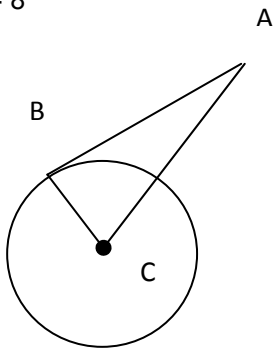
$$143 = 11x$$

$$13 = x$$

7) Find the length of AC in circle C below.  
AB is tangent.

$$AB = 25$$

$$BC = 8$$



$$AB^2 + BC^2 = AC^2$$

$$25^2 + 8^2 = AC^2$$

$$625 + 64 = AC^2$$

$$689 = AC^2$$

$$26.25 \approx AC$$