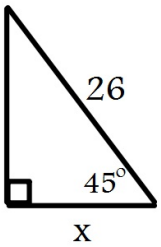
Spiral Review:

1. Solve for x.



2. FOIL

a.) $(x-5)(x+3)$

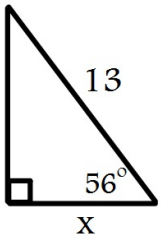
b.) $(x+7)^2$

3. Factor

a.) $x^2 - 12x + 32$

b.) $x^2 + 2x = 63$

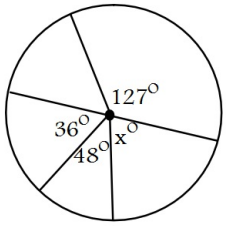
4. Solve for x.



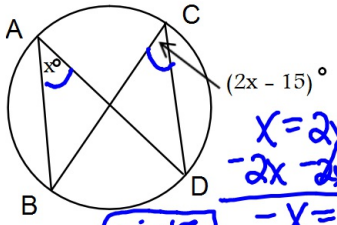
10.1 – 10.6 Review

Find the value of x

1.

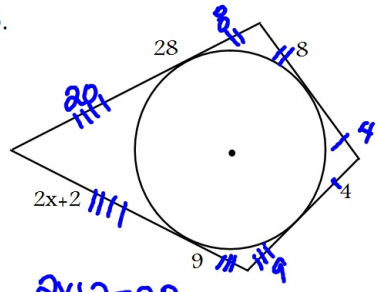


2.



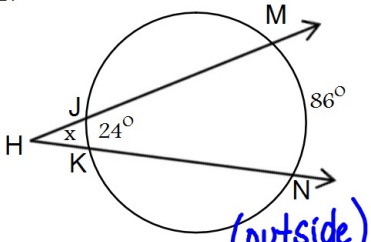
$x = 2x - 15$
$-2x \quad -2x$
$\frac{-x}{-1} = \frac{-15}{-1}$
$\boxed{x = 15}$

3.



$2x + 2 = 20$
$-2 \quad -2$
$\frac{2x}{2} = \frac{18}{2}$
$\boxed{x = 9}$

4.

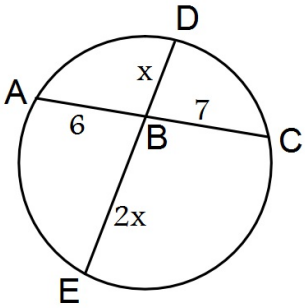


(outside)
angle $= \frac{1}{2}$(arc − arc)
$x = \frac{1}{2}(86 - 24)$
$= \frac{1}{2}(62)$
$\boxed{x = 31}$

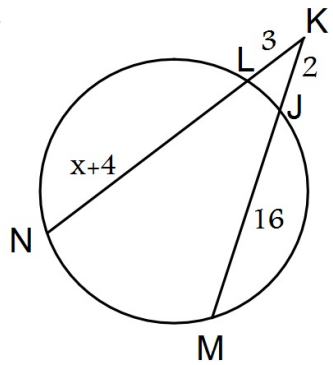
10.7 Review

Find the value of x.

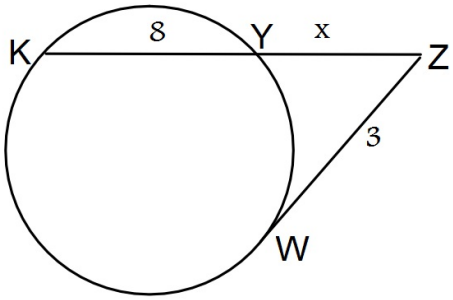
1.



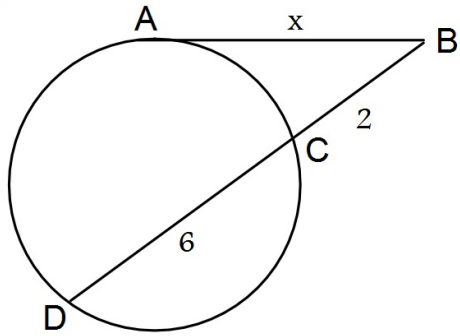
2.



3.



4.

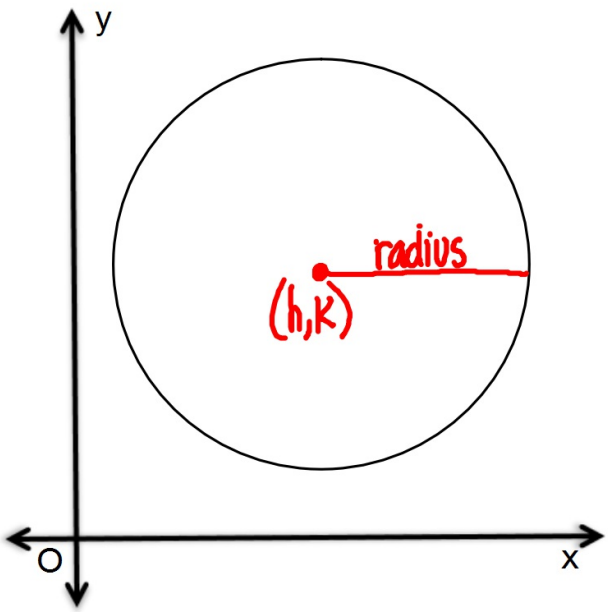


p. 757 10.8 Equations of Circles

Standard form of the equation of a circle:

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

with center at (h,k) and radius r



① To find the radius, you must $\sqrt{r^2}$.

② "h" and "k" will look like the opposite in ( ).

Example 1: Use the information provided to write the equation of a circle.

1. Center: $(\overset{h}{1}, \overset{k}{-8})$

   Radius: 7

$(x-1)^2+(y-{}^{-}8)^2=(7)^2$

$\boxed{(x-1)^2+(y+8)^2=49}$

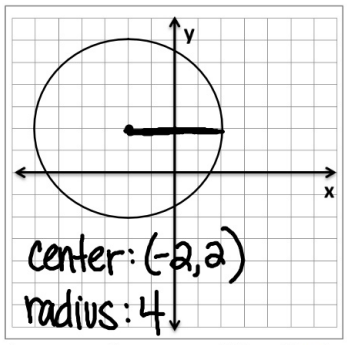
2. Center: origin $(0,0)$

   Radius: $\sqrt{10}$

$(x-0)^2+(y-0)^2=(\sqrt{10})^2$

$\boxed{x^2+y^2=10}$

3.



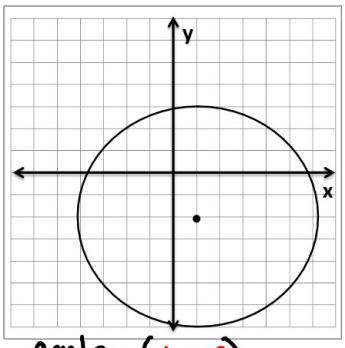
center: $(-2,2)$

radius: 4

$(x-{}^{-}2)^2+(y-2)^2=(4)^2$

$\boxed{(x+2)^2+(y-2)^2=16}$

4.



center: $(1,{}^{-}2)$

radius: 5

$(x-1)^2+(y-{}^{-}2)^2=(5)^2$

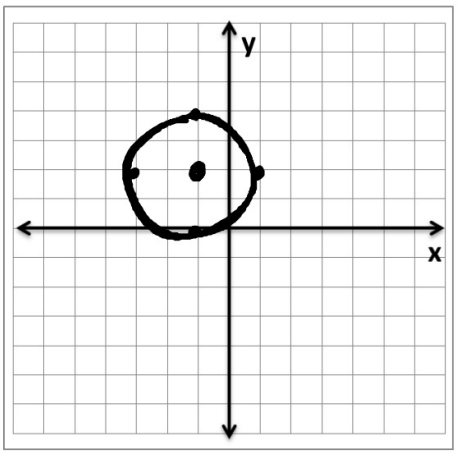
$\boxed{(x-1)^2+(y+2)^2=25}$

Example 2: Identify the center of the circle, radius, and diameter. Sketch the graph.

1. $(x+1)^2 + (y-2)^2 = 4$

center: $(-1,2)$ radius: $\sqrt{4}=2$

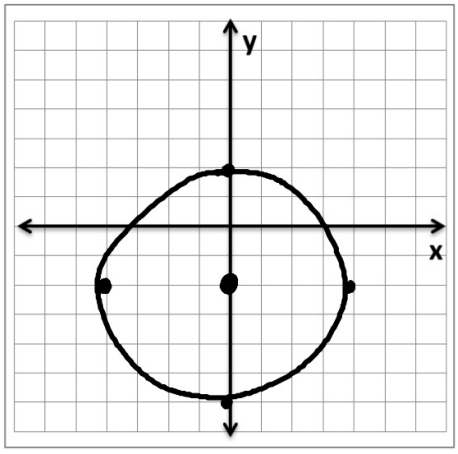
diameter: $2(2)=4$



2. $x^2 + (y+2)^2 = 16$

center: $(0,-2)$ radius: $\sqrt{16}=4$

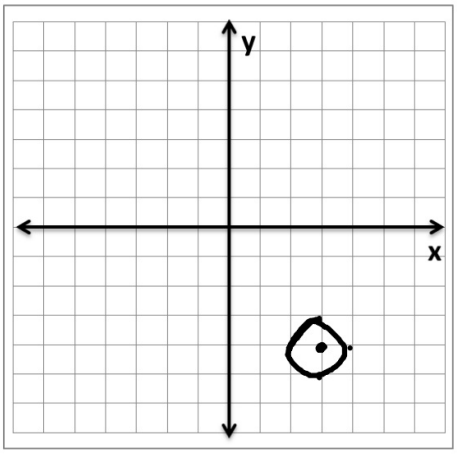
diameter: $2(4)=8$



3. $(x-3)^2 + (x+4) = 1$

center: (3, -4)

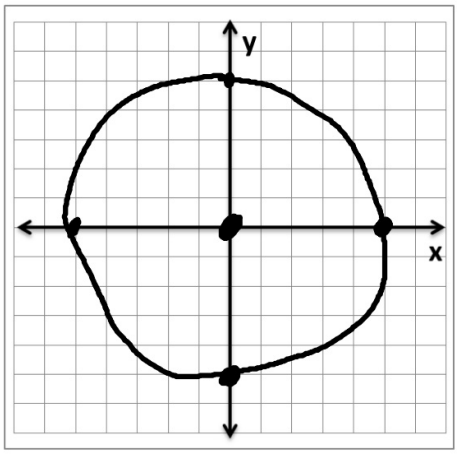
radius: 1 diameter: 2



4. $x^2 + y^2 = 25$

center: (0, 0)

radius: 5 diameter: 10



Turn-in:

Quick Check 10.8

HW:

Worksheet