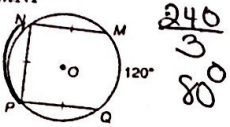


# Geometry Part 2 Study Guide

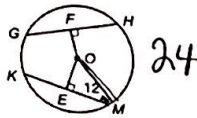
In each circle, O is the center. Find each measure.

1.  $m\widehat{NP}$



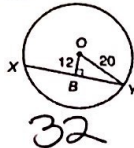
$$\frac{240}{3} = 80$$

2.  $KM$



24

3.  $XY$



32

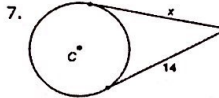
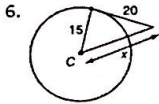
4. Suppose a chord is 20 inches long and is 24 inches from the center of the circle. Find the length of the radius.

26

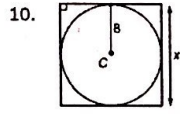
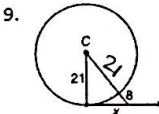
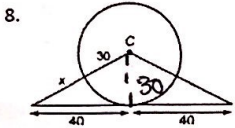
5. Suppose a chord of a circle is 5 inches from the center and is 24 inches long. Find the length of the radius.

For each in circle C, find the value of x. Assume segments that appear to be tangent are tangent.

$x = 25$



$x = 4$



$$30^2 + 40^2 = (x+30)^2$$

$$\sqrt{2500} = (x+30)$$

$$50 = x+30$$

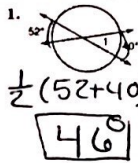
$$x = 20$$

$$21^2 + x^2 = 29^2$$

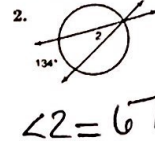
$$x^2 = 400$$

$$x = 20$$

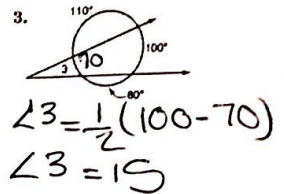
Find the measure of each numbered angle.



$$\frac{1}{2}(52+40) = 46$$



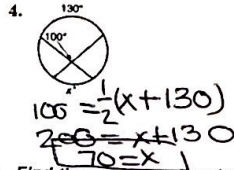
$\angle 2 = 67$



$$\angle 3 = \frac{1}{2}(100-70)$$

$$\angle 3 = 15$$

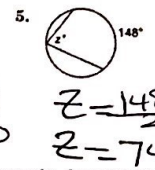
In each circle, find the value of x.



$$100 = \frac{1}{2}(x+130)$$

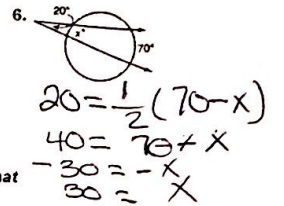
$$200 = x+130$$

$$70 = x$$



$$z = 148$$

$$z = 74$$



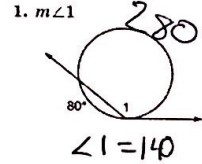
$$20 = \frac{1}{2}(70-x)$$

$$40 = 70-x$$

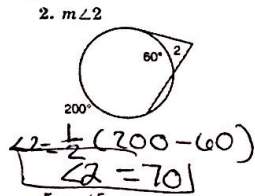
$$-30 = -x$$

$$30 = x$$

Find the measure of each angle. Assume segments that appear to be tangent are tangent.

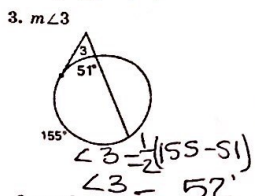


$\angle 1 = 140$



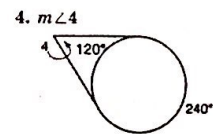
$$\angle 2 = \frac{1}{2}(200-60)$$

$$\angle 2 = 70$$



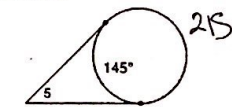
$$\angle 3 = \frac{1}{2}(155-51)$$

$$\angle 3 = 52$$



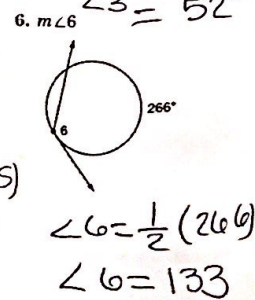
$$\angle 4 = \frac{1}{2}(240-120)$$

$$\angle 4 = 60$$



$$\angle 5 = \frac{1}{2}(215-145)$$

$$\angle 5 = 35$$



$$\angle 6 = \frac{1}{2}(266-6)$$

$$\angle 6 = 133$$

Find the coordinates of the center of the circle and the measure of the radius given:

1)  $(x+1)^2 + y^2 = 121$

$C = (-1, 0) \quad r = 11$

2)  $(x-4)^2 + (y-1)^2 = 49$

$C(4, 1) \quad r = 7$

Write an equation of a circle with the given center that passes thru the given point.

3) center: (2, 3) point: (0, 5)

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

$(0-2)^2 + (5-3)^2 = r^2$

$(x-2)^2 + (y-3)^2 = 8$

Given the two endpoints of a diameter, find the center and radius of a circle.

4) endpoint: (3, 6) and endpoint: (-1, -2)

$\frac{3+(-1)}{2}, \frac{6+(-2)}{2}$

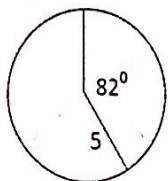
$(3-1)^2 + (6-2)^2 = r^2$   
 $20 = r^2$

(1, 2)  
center

$(x-1)^2 + (y-2)^2 = 20$

Find the length of the minor arc.

5)



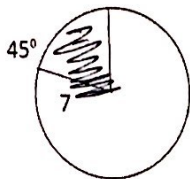
$AL = \frac{\theta \cdot \pi \cdot r}{180}$

$\frac{82 \cdot \pi \cdot 5}{180}$

$7.16 \text{ or } \frac{41\pi}{18}$

Find the area of shaded portion.

6)

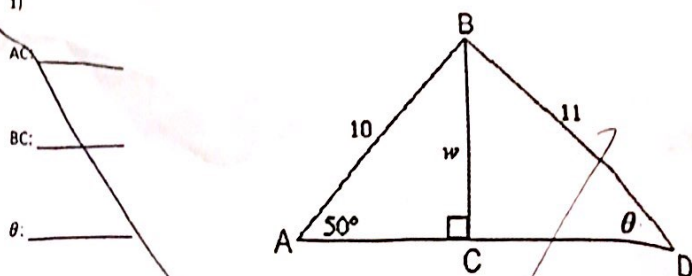


$AS = \frac{\theta \cdot \pi \cdot r^2}{360}$

$\frac{45 \cdot \pi \cdot 7^2}{360}$

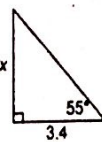
$6.125\pi \text{ or } 19.24$

1)

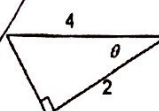


Find the missing information.

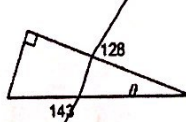
2.  $x =$  \_\_\_\_\_



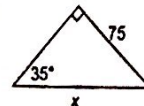
3.  $\theta =$  \_\_\_\_\_



4.  $\theta =$  \_\_\_\_\_



5.  $x =$  \_\_\_\_\_



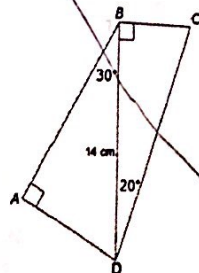
6. Give the picture, find the following sides:

$\overline{AD} =$  \_\_\_\_\_

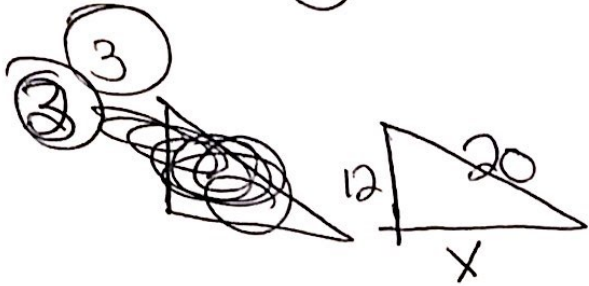
$\overline{BC} =$  \_\_\_\_\_

$\overline{CD} =$  \_\_\_\_\_

$\overline{AB} =$  \_\_\_\_\_



① 
$$\frac{360-120}{3} = 80^\circ$$



$$x^2 + 12^2 = 20^2$$

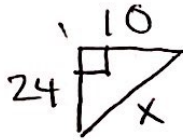
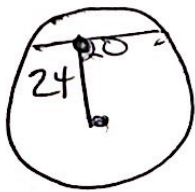
$$x^2 + 144 = 400$$

$$x^2 = 256$$

$$x = 16$$

$$xy = 32$$

④

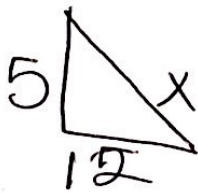
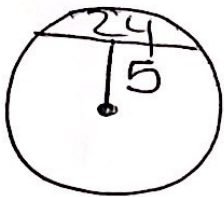


$$24^2 + 10^2 = x^2$$

$$676 = x^2$$

$$x = 26$$

⑤



$$x = 13$$

⑥

$$x^2 = 15^2 + 20^2$$

$$x^2 = 625$$

$$x = 25$$