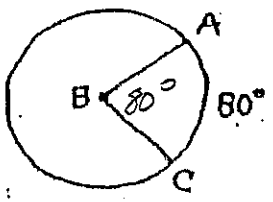
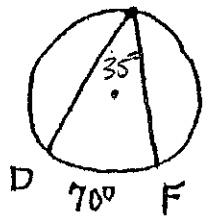
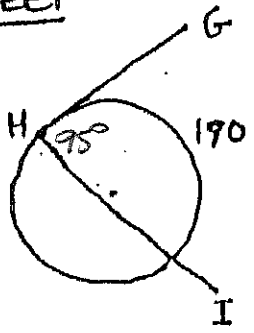
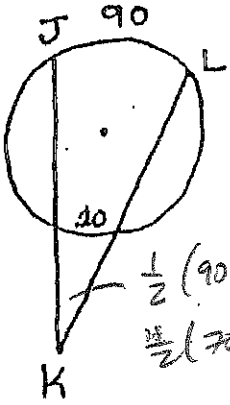
Find the vertex angles! **10.5 Worksheet**

$2\overline{)190}$ $\frac{18}{10}$ 95

① 

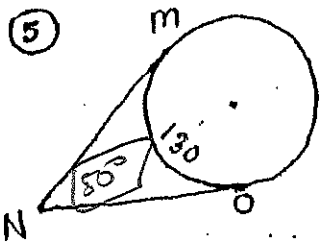
② 

③ 

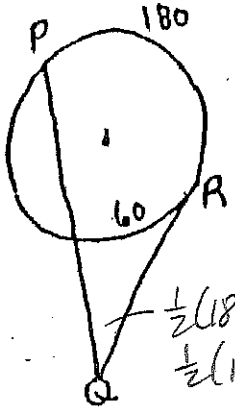
④ 

$\frac{1}{2}(90-20)$

$\frac{1}{2}(70) = 35°$

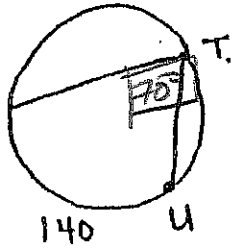
⑤ 

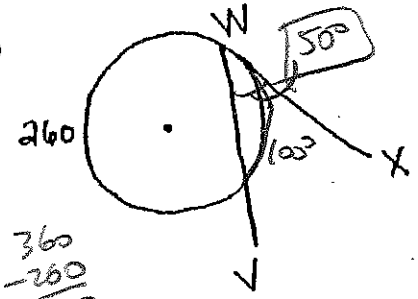
$180 - 130 = 50$

⑥ 

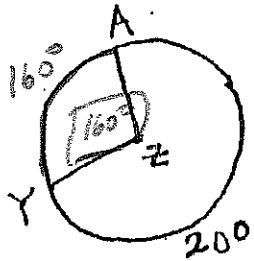
$\frac{1}{2}(180-60)$

$\frac{1}{2}(120) = 60°$

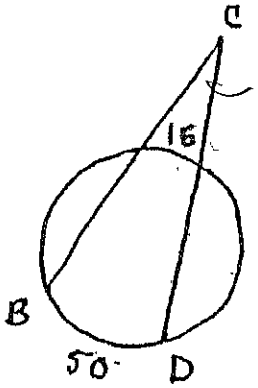
⑦ 

⑧ 

$360 - 260 = 100$

⑨ 

$360 - 200 = 160$

⑩ 

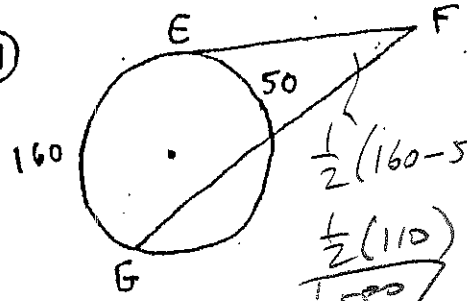
$\frac{1}{2}(50-16)$

17°

$50 - 16 = 34$

Key

(11)

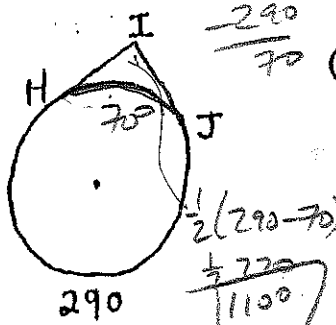


$\frac{1}{2}(160-50)$

$\frac{1}{2}(110)$

55°

(12)



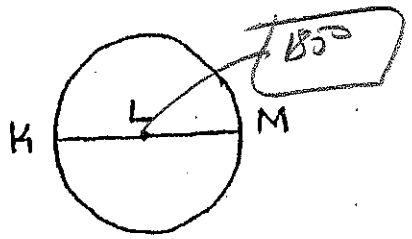
360
−290
70

$\frac{1}{2}(290-70)$

$\frac{1}{2}220$

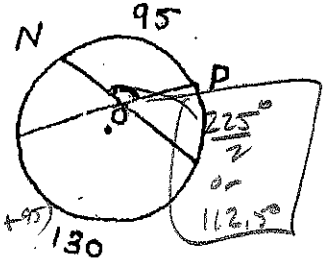
110°

(13)



180°

(14)



225°

$\frac{225}{2}$

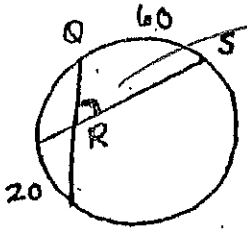
112.5°

130
+95
225

$\frac{1}{2}(130+95)$

112
2 | 225
2
2
25

(15)

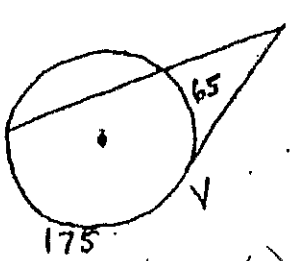


$\frac{1}{2}(60+20)$

$\frac{1}{2}80$

40°

(16)



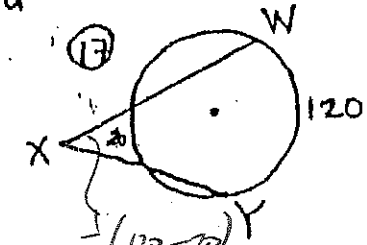
175
−65
110

$\frac{1}{2}(175-65)$

$\frac{1}{2}(110)$

55°

(17)



$\frac{1}{2}(120-20)$

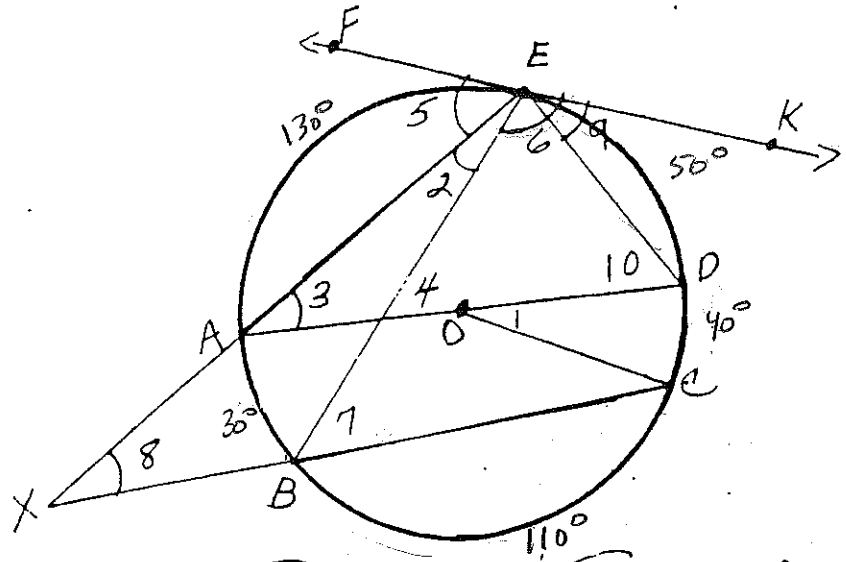
$\frac{1}{2}(100)$

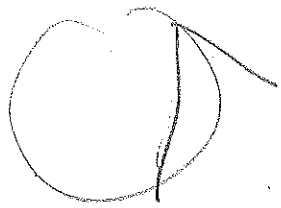
50°

Sec 1.5

Name Key

Date _____





$\overset{\frown}{AB} = 30°$; $\overset{\frown}{CD} = 40°$; $\overset{\frown}{DE} = 50°$

$\overline{AD}$ is a diameter.

$\angle 1 = 40°$

$\angle 2 = 15°$

$\angle 3 = 25°$

$\angle 4 = \frac{1}{2}(50+30) = 40°$

$\angle 5 = \frac{1}{2}130 = 65°$

$\angle 6 = \frac{1}{2}(110+40+50) = \frac{1}{2}(200) = 100°$

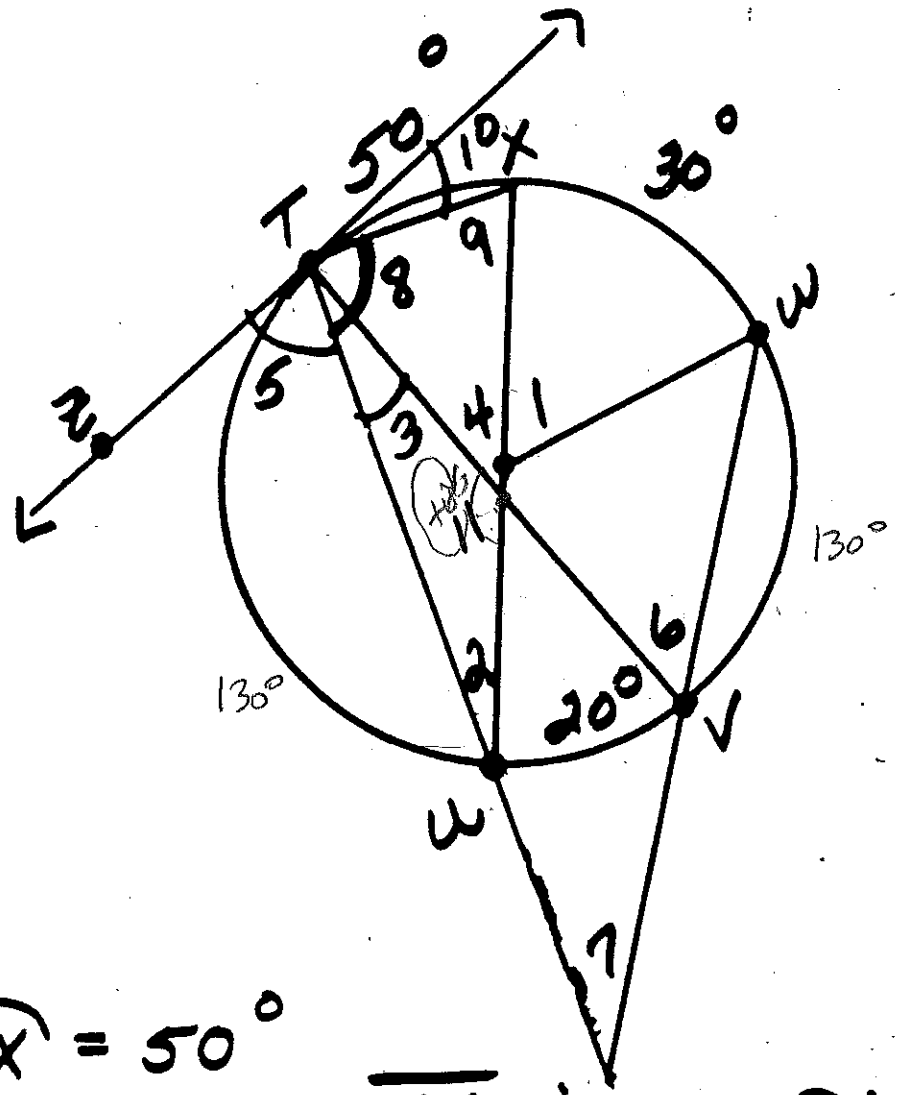
$\angle 7 = \frac{1}{2}90 = 45°$

$\angle 8 = \frac{1}{2}(90-30) = 30°$

$\angle 9 = \frac{1}{2}50 = 25°$

$\angle 10 = \frac{1}{2}130 = 65°$

2



$\angle 1 = 30°$

$\angle 2 = 25°$

$\angle 3 = 10°$

$\angle 4 = \frac{1}{2}(50+20) = 35°$

$\angle 5 = 65°$

$\angle 6 = 40°$

$\angle 7 = \frac{1}{2}(80-20) = 30°$

$\angle 8 = 90°$

$\angle 9 = 65°$

$\angle 10 = 25°$

$\angle 11 = 110 - 35 = 145°$

180
$-\ 35$
145

$\overset{\frown}{TX} = 50°$

$\overset{\frown}{XW} = 30°$

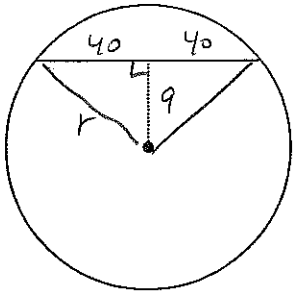
$\overset{\frown}{UV} = 20°$

$\overline{XU}$ is a Diameter.

Find each angle

Geometry 10.1-10.5 Name Key

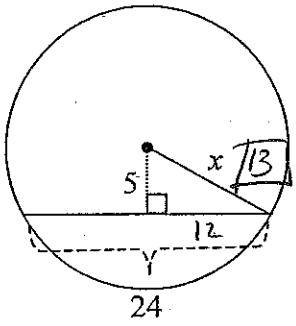
1. Find the circumference of a circle in which an 80 cm chord is 9 cm from the center.



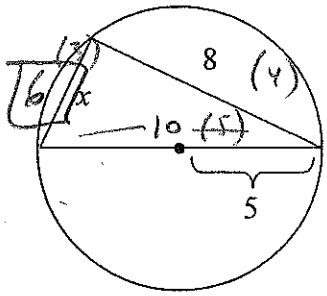
$r^2 = 40^2 + 9^2$
$r^2 = 1600 + 81$
$r^2 = 1681$
$r = \sqrt{1681}$
$r = 41$

$C = 2\pi r$
$C = 2\pi(41)$
$C = \boxed{82\pi}$

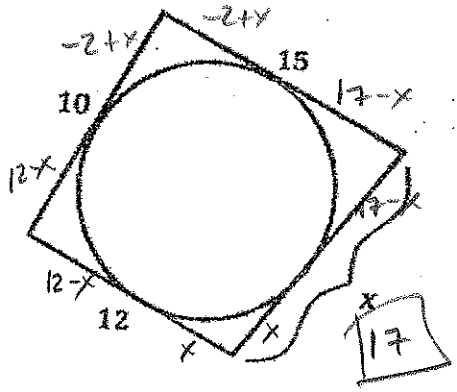
2. Find x.



3. Find x.



4. Find x.
(hint: walk around problem)

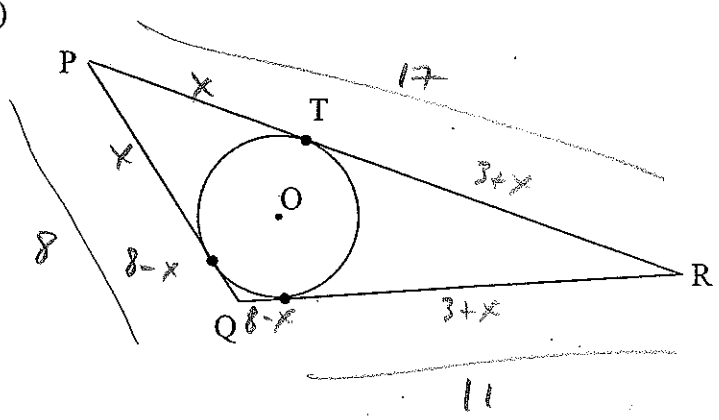


$10 - (12 - x)$
$-2 + x$

$15 - (-2 + x)$
$17 - x$

$17 - x + x$

5. Circle O is inscribed in ΔPQR. $PQ = 8$, $QR = 11$, and $PR = 17$. Find PT.
(hint: walk around problem)

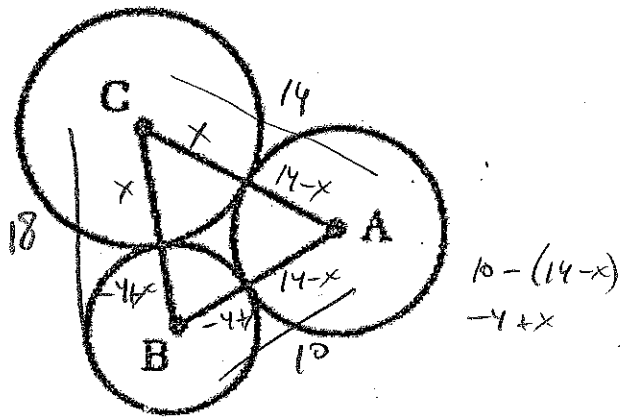


$x + 3 + x = 17$
$2x + 3 = 17$
$2x = 14$
$x = 7$
$PT = x = \boxed{7}$

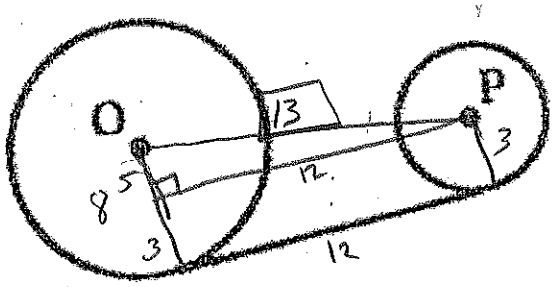
$11 - (8 - x)$
$3 + x$

6. $AC = 14$, $AB = 10$, $CB = 18$
Find the length of the radius of the largest circle.

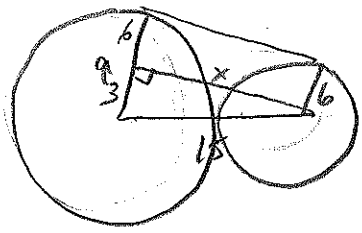
$x - 4 + x = 18$
$2x - 4 = 18$
$2x = 22$
$x = 11$



7. Circle O with radius 8 and circle P with radius 3. The length of the common external tangent segment is 12. Find the distance between the two circles.

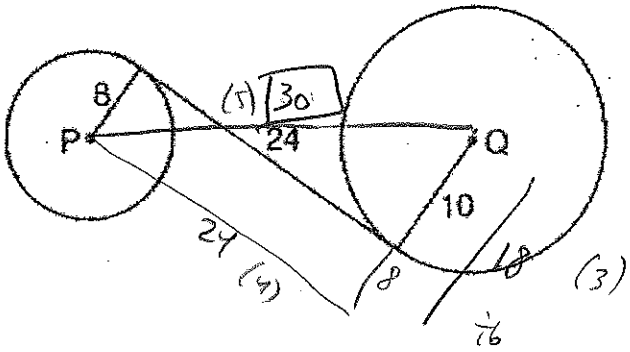


8. Two circles with radii 9 cm and 6 cm ~~are 2 cm apart.~~ are touching. Find the length of the common ~~internal~~ external tangent.

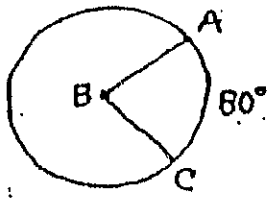


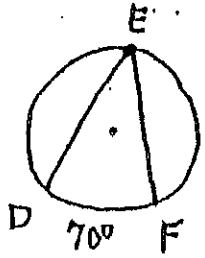
$x^2 + 3^2 = 15^2$
$x^2 + 9 = 225$
$x^2 = 216$
$x = \sqrt{216}$

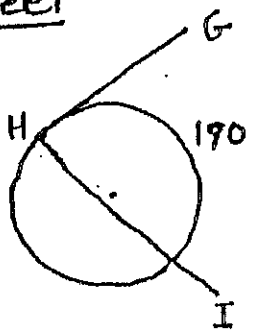
9. Find PQ.

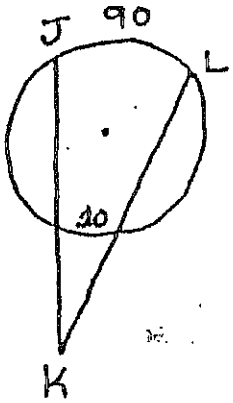


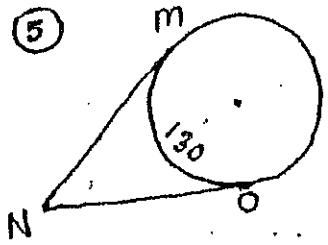
Find the vertex angles! **10.5 Worksheet**

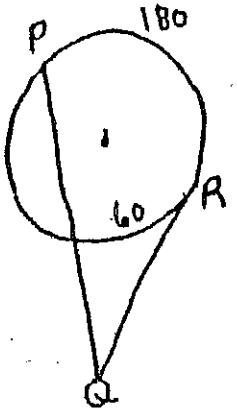
① 

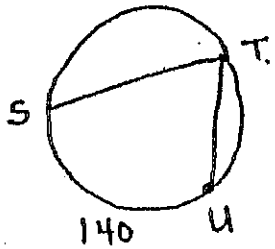
② 

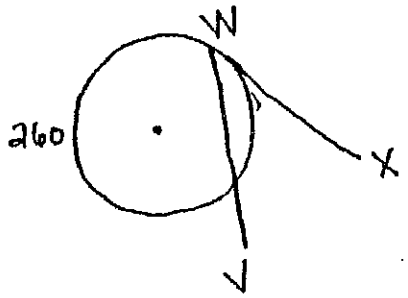
③ 

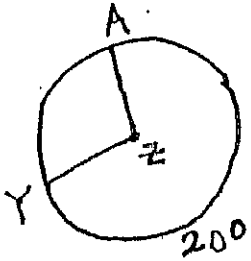
④ 

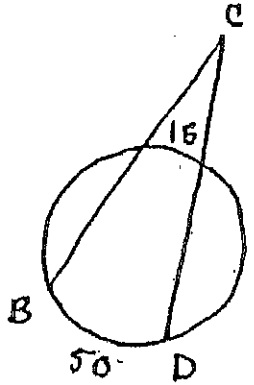
⑤ 

⑥ 

⑦ 

⑧ 

⑨ 

⑩ 

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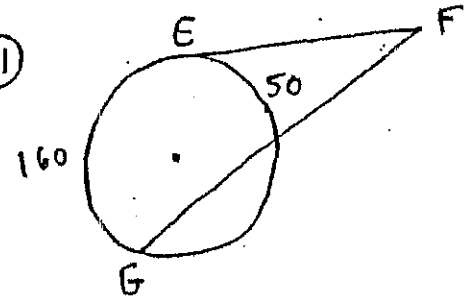

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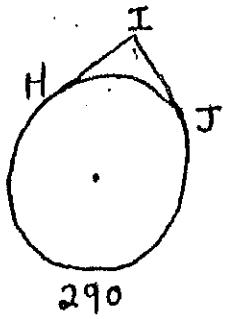

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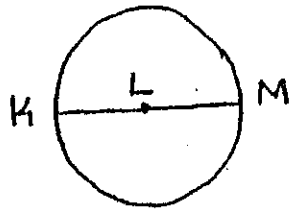

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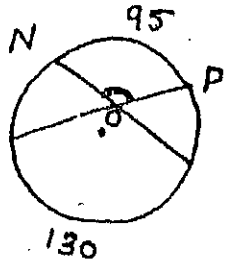

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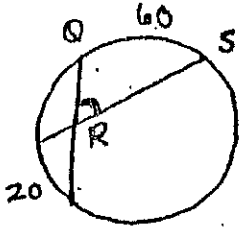
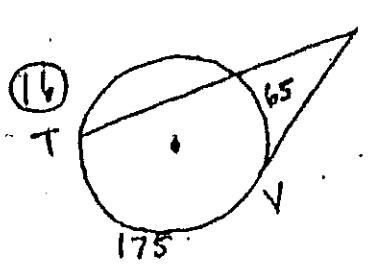


(16)



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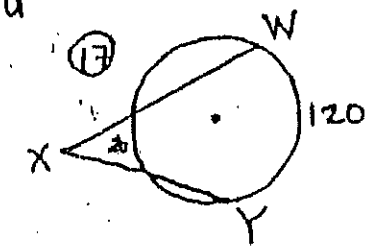
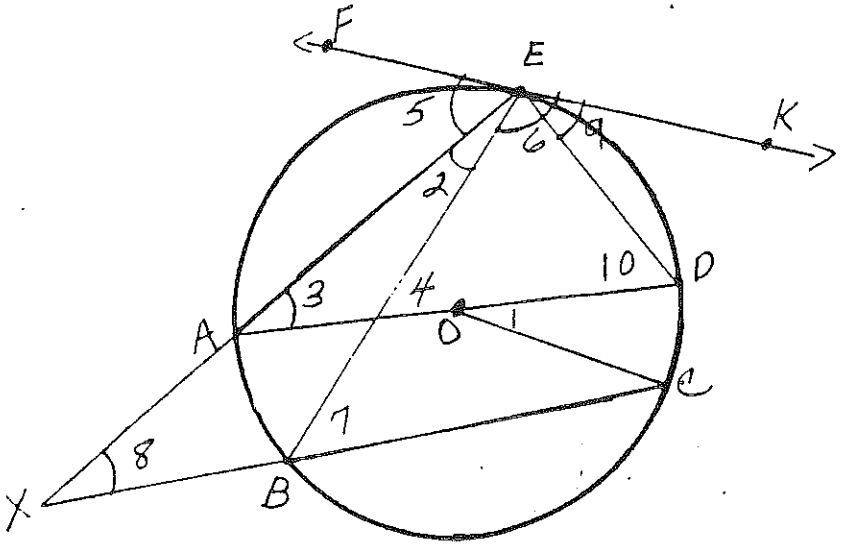


Sec. 10.5

Name _____

Date _____



$\overset{\frown}{AB} = 30°$; $\overset{\frown}{CD} = 40°$; $\overset{\frown}{DE} = 50°$

$\overline{AD}$ is a diameter.

$\angle 1 =$

$\angle 2 =$

$\angle 3 =$

$\angle 4 =$

$\angle 5 =$

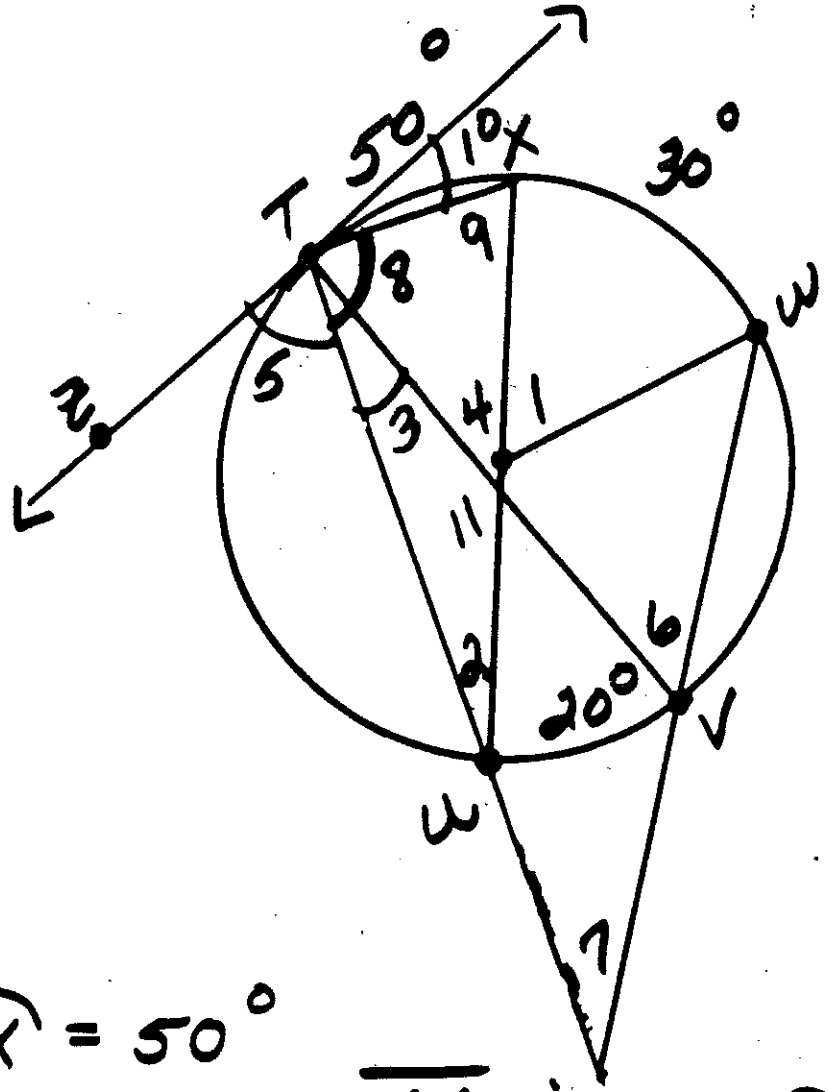
$\angle 6 =$

$\angle 7 =$

$\angle 8 =$

$\angle 9 =$

$\angle 10 =$



$\overset{\frown}{TX} = 50°$

$\overset{\frown}{XW} = 30°$

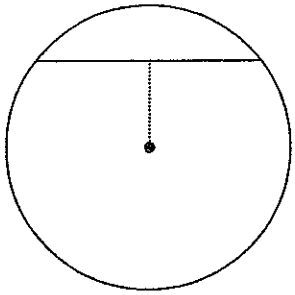
$\overset{\frown}{UV} = 20°$

$\overline{XU}$ is a Diameter.

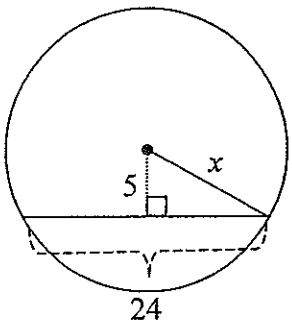
Find each angle

Geometry 10.1-10.5 Name_____

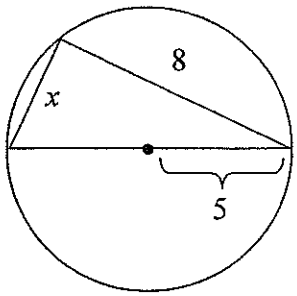
1. Find the circumference of a circle in which an 80 cm chord is 9 cm from the center.



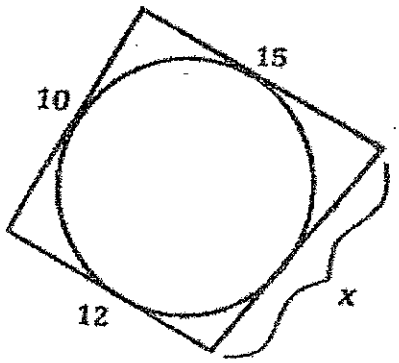
2. Find x.



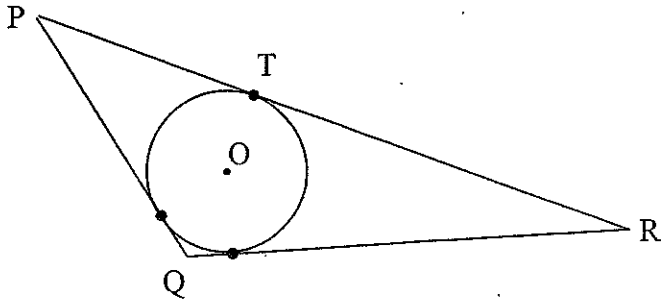
3. Find x.



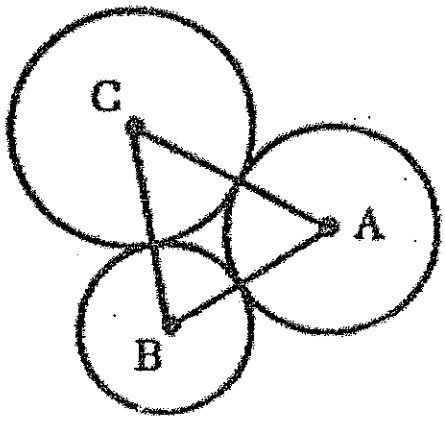
4. Find x.
(hint: walk around problem)



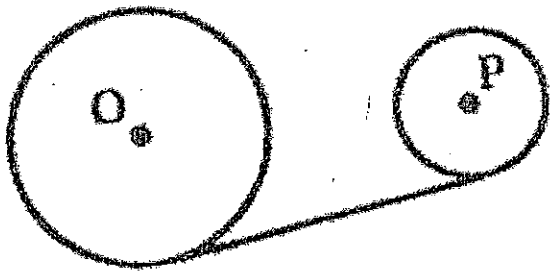
5. Circle O is inscribed in ΔPQR. $PQ = 8$, $QR = 11$, and $PR = 17$. Find PT.
(hint: walk around problem)



6. $AC = 14$, $AB = 10$, $CB = 18$
Find the length of the radius of the largest circle.



7. Circle O with radius 8 and circle P with radius 3. The length of the common external tangent segment is 12. Find the distance between the two circles.



8. Two circles with radii 9 cm and 6 cm ~~are 2 cm apart.~~ are touching. Find the length of the common ~~internal~~ external tangent.

9. Find PQ.