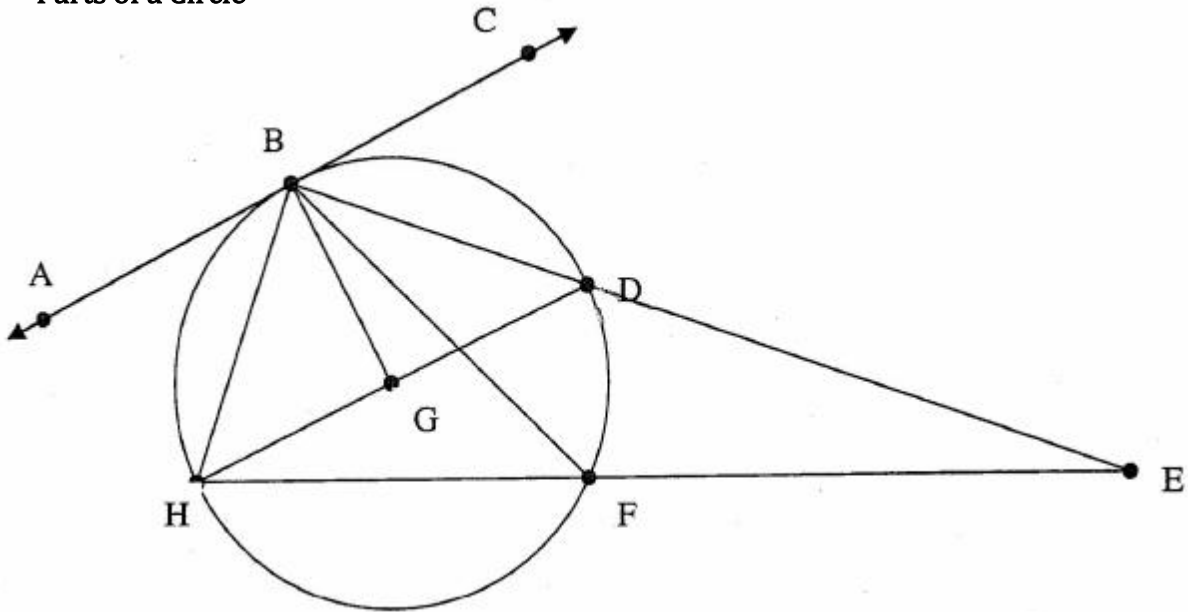


I. Parts of a Circle



Use the above circle to find ONE of each of the following:

1. Radius: \overline{HG} \overline{GD} \overline{BG}
2. Diameter: \overline{HO}
3. Chord: \overline{BH} \overline{BD} \overline{HF} \overline{BF}
4. Secant: \overleftrightarrow{BOE} \overleftrightarrow{HFE}
5. Tangent: \overleftrightarrow{ABC}
6. Minor Arc: \widehat{BD} \widehat{HF} \widehat{BH} \widehat{DF}
7. Semi-circle: \widehat{HBO} \widehat{HFO}
8. Major Arc: \widehat{FHB} \widehat{DAB}
9. Central Angle: $\angle BGD$ $\angle BGH$
10. Inscribed Angle: $\angle BFH$ $\angle BOH$ $\angle BHF$
11. Outside Angle: $\angle E$

II. Day 2 Practice

Find the missing side of each triangle. Leave your answers in simplest radical form.

1)

$$x^2 + 5^2 = 11^2$$

$$\frac{x^2 + 25}{-25} = \frac{121}{-25}$$

$$\sqrt{x^2} = \sqrt{96}$$

$$x = 4\sqrt{6}$$

2)

$$x^2 = 5^2 + (5\sqrt{2})^2$$

$$\sqrt{x^2} = \sqrt{75}$$

$$x = 5\sqrt{3}$$

State if the three side lengths form an acute, obtuse, or right triangle.

3) 5, 12, 15

$$5^2 + 12^2 = 15^2$$

$$169 \neq 225$$

$$169 < 225$$

obtuse \triangle

4) $\sqrt{14}$, 3, $\sqrt{23}$

$$3^2 + (\sqrt{14})^2 = (\sqrt{23})^2$$

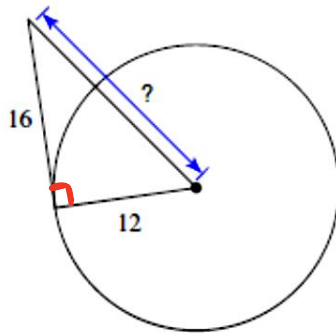
$$25 \neq 23$$

$$25 > 23$$

Acute \triangle

Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

5)

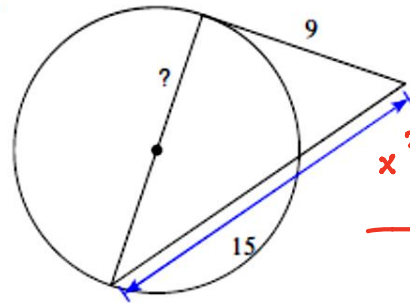


$$12^2 + 16^2 = x^2$$

$$\sqrt{400} = \sqrt{x^2}$$

$$x = 20$$

6)



$$x^2 + 9^2 = 15^2$$

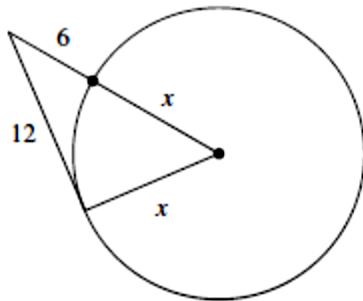
$$-9^2 \quad -9^2$$

$$\sqrt{x^2} = \sqrt{144}$$

$$x = 12$$

Solve for x. Assume that lines which appear to be tangent are tangent.

7)



$$x^2 + 12^2 = (x+6)^2$$

$$x^2 + 144 = x^2 + 12x + 36$$

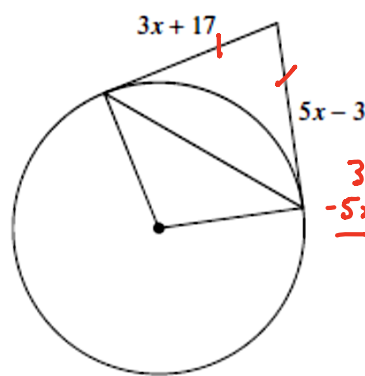
$$144 = 12x + 36$$

$$-36 \quad -36$$

$$\frac{108}{12} = \frac{12x}{12}$$

$$x = 9$$

8)



$$3x+17 = 5x-3$$

$$-5x \quad -17 \quad -5x \quad -17$$

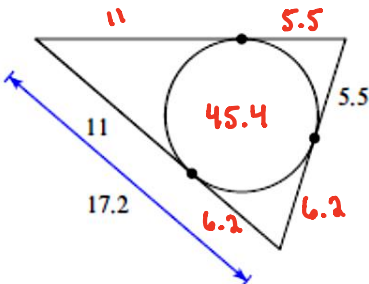
$$-2x = -20$$

$$-2 \quad -2$$

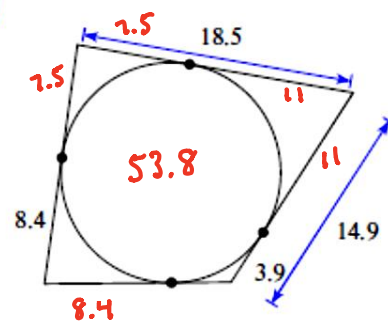
$$x = 10$$

Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

9)



10)



III. Day 3 Practice

Use the given figure to answer questions 1 – 6.
Assume O is the center of the circle.

1. $m\widehat{LMN} = 180^\circ$

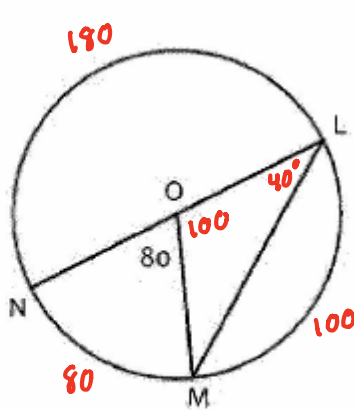
2. $m\widehat{MN} = 80^\circ$

3. $m\angle LOM = 100^\circ$

4. $m\widehat{LM} = 100^\circ$

5. $m\angle L = 40^\circ$

6. $m\widehat{MLN} = 280^\circ$



Use the given figure to answer questions 7 – 12.
Assume O is the center of the circle.

$m\widehat{TU} = 58^\circ$

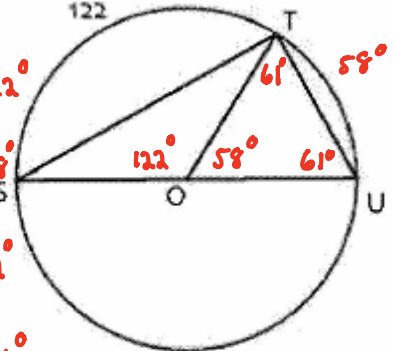
$m\angle SOT = 122^\circ$

$m\angle TOU = 58^\circ$

$m\widehat{TSU} = 302^\circ$

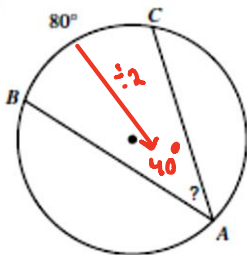
$m\angle OTU = 61^\circ$

$m\widehat{SUT} = 238^\circ$

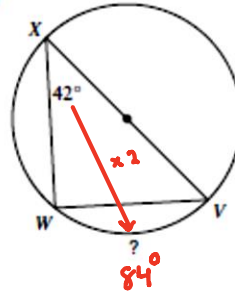


Find the measure of the arc or angle indicated.

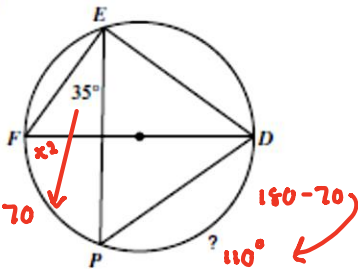
5)



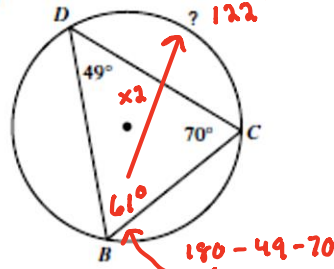
6)



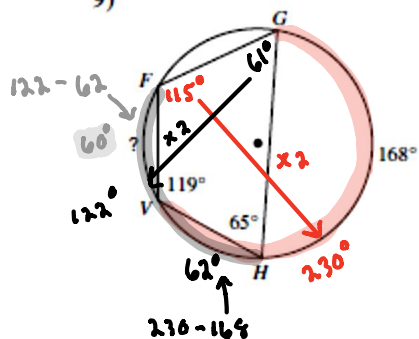
7)



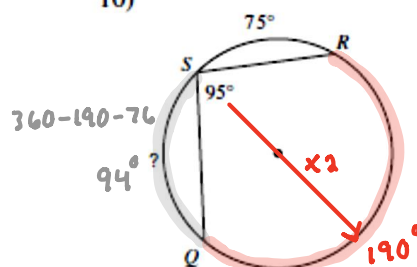
8)



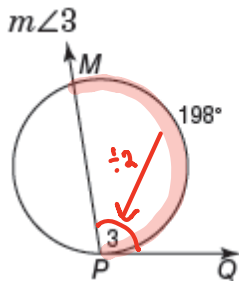
9)



10)

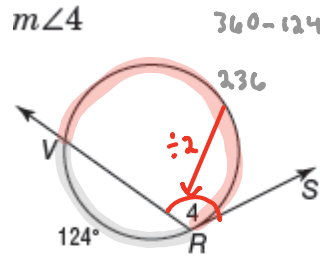


Find the indicated angle measure.



$$m\angle 3 = 198 \div 2$$

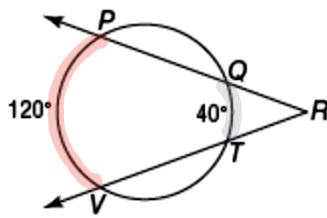
$$m\angle 3 = 99^\circ$$



$$m\angle 4 = 236 \div 2$$

$$m\angle 4 = 118^\circ$$

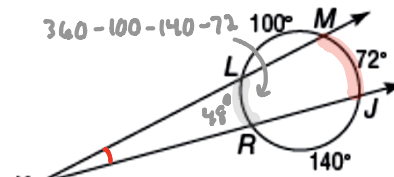
7. $m\angle R$



$$m\angle R = \frac{1}{2} (120 - 40)$$

$$m\angle R = 40^\circ$$

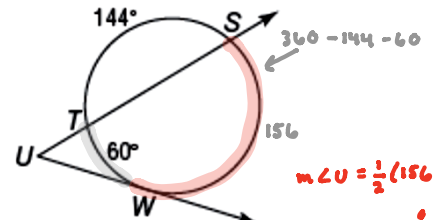
8. $m\angle K$



$$m\angle K = \frac{1}{2} (72 - 48)$$

$$m\angle K = 12^\circ$$

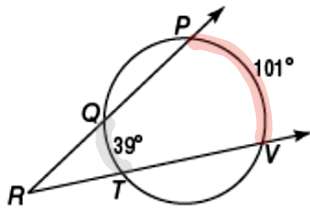
9. $m\angle U$



$$m\angle U = \frac{1}{2} (156 - 60)$$

$$m\angle U = 48^\circ$$

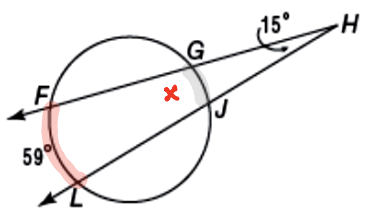
4. $m\angle R$



$$m\angle R = \frac{1}{2} (101 - 39)$$

$$m\angle R = 31^\circ$$

5. $m\widehat{GJ}$



$$2(15) = \frac{1}{2}(59 - x)$$

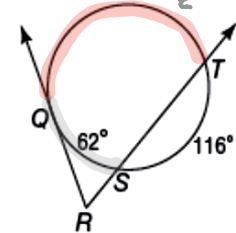
$$30 = 59 - x$$

$$-59 \quad -59$$

$$\frac{-29}{-1} = \frac{-x}{-1}$$

$$x = 29^\circ$$

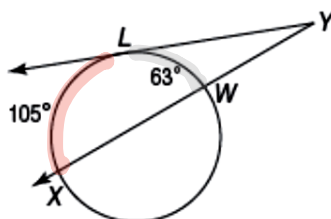
6. $m\angle R$



$$m\angle R = \frac{1}{2} (116 - 62)$$

$$m\angle R = 27^\circ$$

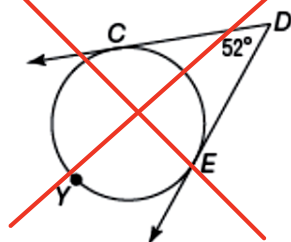
7. $m\angle Y$



$$m\angle Y = \frac{1}{2} (105 - 63)$$

$$m\angle Y = 21^\circ$$

8. $m\widehat{CE}$



9. $m\widehat{YAB}$

