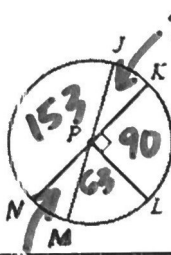


1.

If  $m\angle MPL = 63^\circ$ , find each measure.



- a)  $m\widehat{JK} = 27^\circ$
- b)  $m\widehat{NJ} = 153^\circ$
- c)  $m\widehat{JL} = 117^\circ$

- d)  $m\widehat{KNM} = 207^\circ$
- e)  $m\widehat{MJL} = 297^\circ$
- f)  $m\widehat{JLK} = 333^\circ$

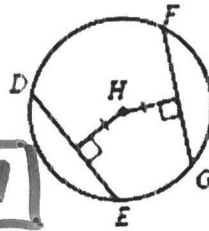
2.

If  $DE = 11x + 15$  and  $FG = 32x - 27$ , find  $DE$ .

$$11x + 15 = 32x - 27$$

$$42 = 21x$$

$$2 = x \rightarrow DE = 37$$



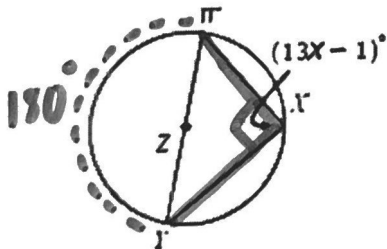
\* If chords are equidistant from the center then they are  $\cong$

3. Find  $x$  and then state which theorem or fact you used to help you solve.

$$13x - 1 = 90$$

$$13x = 91$$

$$x = 7$$



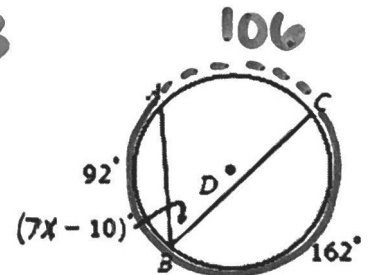
\* The inscribed angle is half the measure of the intercepted arc.

4. Find  $x$  and then state which theorem or fact you used to help you solve.

$$7x - 10 = 53$$

$$7x = 63$$

$$x = 9$$



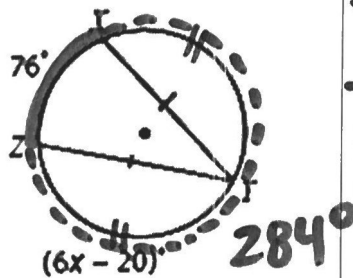
\* Circles sum to  $360^\circ$   
\* Angle = Arc/2

5. Find  $x$  and then state which theorem or fact you used to help you solve.

$$6x - 20 = 142$$

$$6x = 162$$

$$x = 27$$



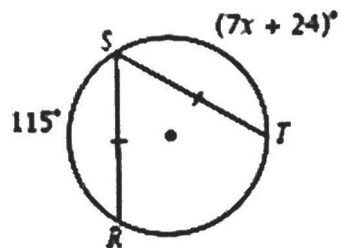
\* If two chords are  $\cong$  then the arcs they form are  $\cong$ .

6. Find  $x$  and then state which theorem or fact you used to help you solve.

$$7x + 24 = 115$$

$$7x = 91$$

$$x = 13$$



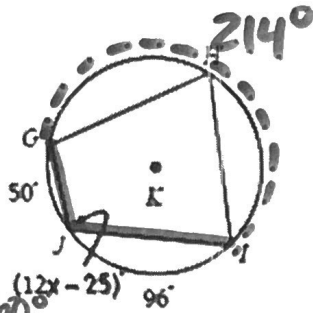
\* If two chords are  $\cong$  then the arcs they form are  $\cong$

7. Find  $x$  and then state which theorem or fact you used to help you solve.

$$12x - 25 = 107$$

$$12x = 132$$

$$x = 11$$



- \* Circles sum  $360^\circ$
- \* Angle = Arc/2

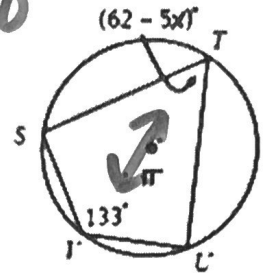
8. Find  $x$  and then state which theorem or fact you used to help you solve.

$$62 - 5x + 133 = 180$$

$$-5x + 195 = 180$$

$$-5x = -15$$

$$x = 3$$



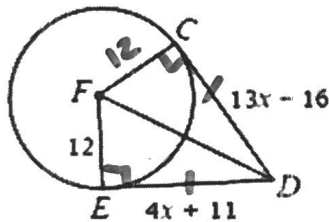
- \* The opp. angles in inscribed quadrilaterals are supplementary.

9. Given that DC and DE are tangent to circle F. Find  $x$  and then state which theorem or fact you used to help you solve.

$$13x - 16 = 4x + 11$$

$$9x = 27$$

$$x = 3$$



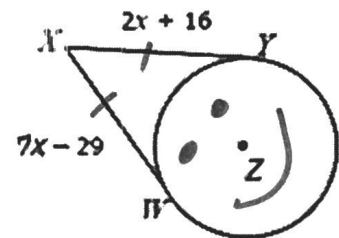
- \* Party Hat: Tangent segments that meet at a common exterior point are  $\cong$ !

10. Given that XY and XW are tangent to circle Z. Find  $x$  and then state which theorem or fact you used to help you solve.

$$2x + 16 = 7x - 29$$

$$45 = 5x$$

$$9 = x$$



11. Given that the 12 unit segment is tangent to the circle. Find  $x$  and then state which theorem or fact you used to help you solve.

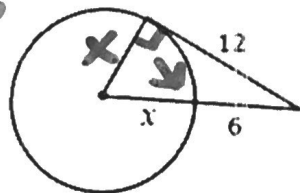
$$x^2 + 12^2 = (x + 6)^2$$

$$x^2 + 144 = x^2 + 6x + 6x + 36$$

$$144 = 12x + 36$$

$$108 = 12x$$

$$9 = x$$



- \* Radi are  $\perp$  to tangent lines
- \*  $a^2 + b^2 = c^2$

Dear Student,

To prepare for the quiz on Tuesday (1/15) you can complete the "Circles Quiz Study Guide" located in your packet. You have the knowledge to complete questions 1-25. On Monday, we will review the information needed to answer the remaining questions (26-30).

Coach Corbin