

Name _____

Write your questions here!

Inscribed Angles

What is this "inscribed" stuff? Inscribed means _____

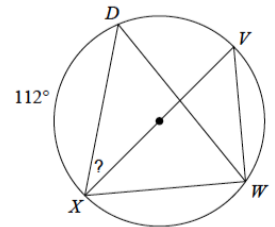
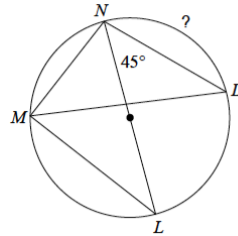
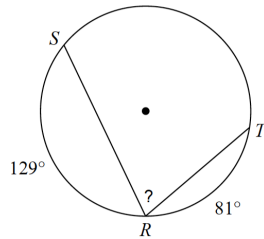
Key words: Inscribed, Arc

Theorem #1: _____

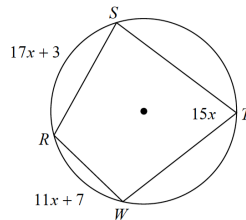
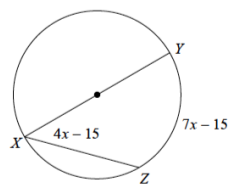
So what does this all mean?

Examples of Theorem #1.

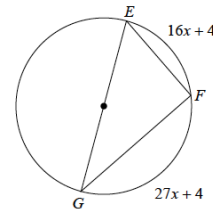
Solve for the missing angle or arc.



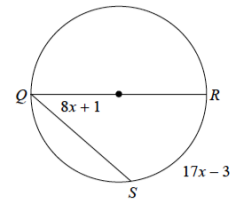
Solve for x:



Find $m\angle GEF$



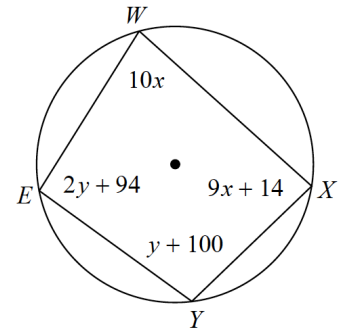
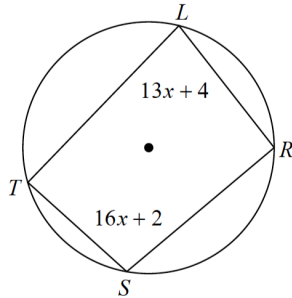
Find $m\angle RQS$



2 | PACKET 11.3: INSCRIBED ANGLES

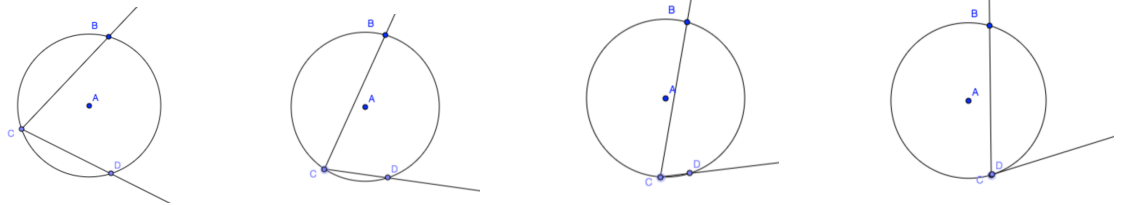
Corollary #1: _____

Examples of Corollary #1:



Theorem #2: _____

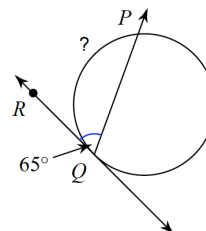
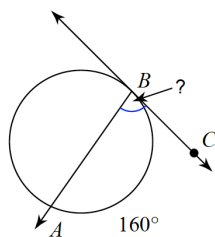
Dynamic Example using Geogebra



Notice that as C approaches D, \overrightarrow{CD} , which forms half of the intercepted arc, eventually becomes the tangent line.

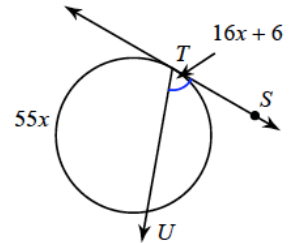
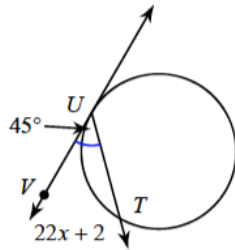
Examples of Theorem #2

Find the indicated measurement. Assume lines that appear tangent are tangent.

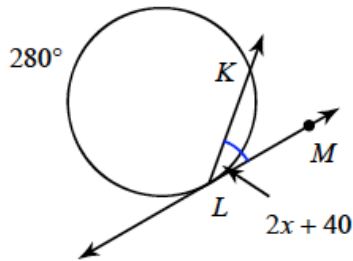


More Examples of Theorem #2

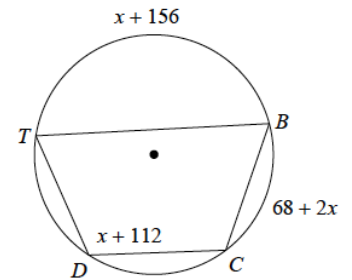
Solve for x . Assume lines that appear tangent are tangent.



You try two:



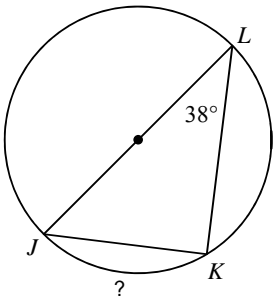
Find $m\angle TDC$



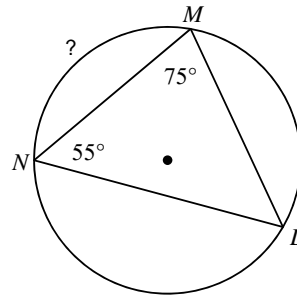
Now, summarize
your notes here!

Find the measure of the arc or angle indicated.

1)

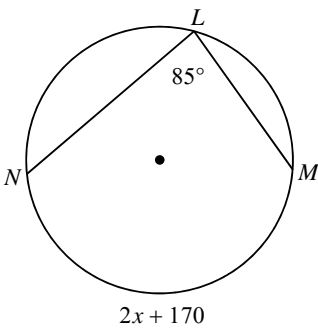


2)

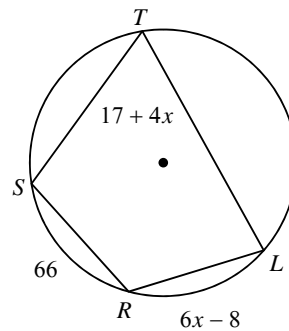


Solve for x .

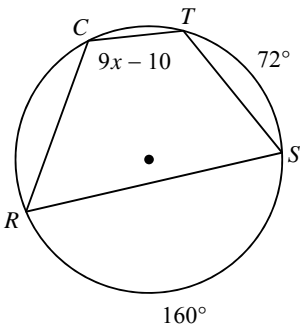
3)



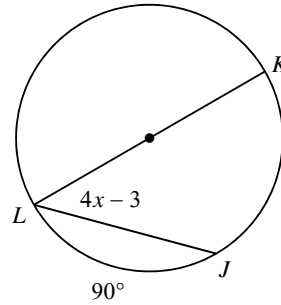
4)



5)

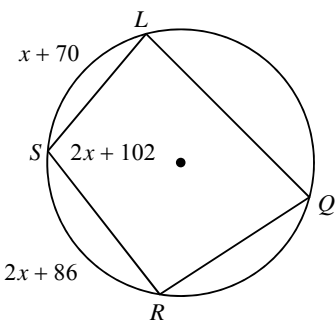


6)

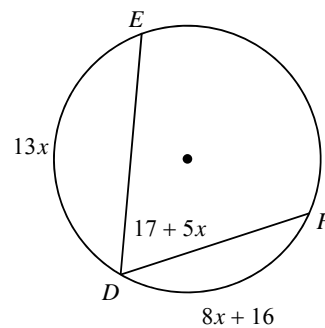


Find the measure of the arc or angle indicated.

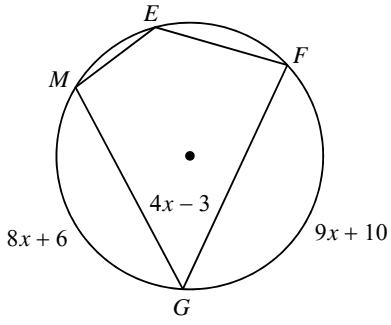
7) Find $m\angle LSR$



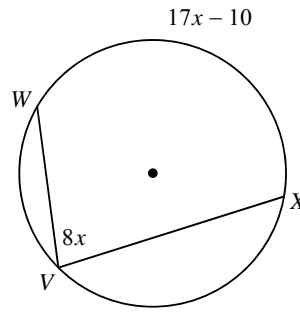
8) Find $m\angle EDF$



9) Find $m\widehat{FG}$

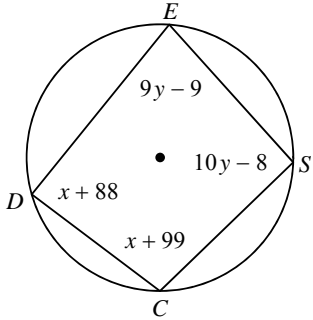


10) Find $m\widehat{WX}$

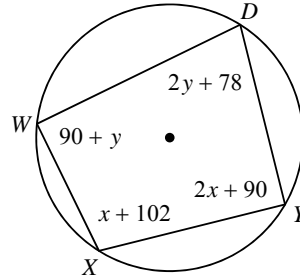


Solve for x and y .

11)

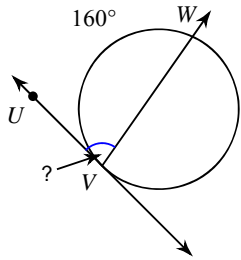


12)

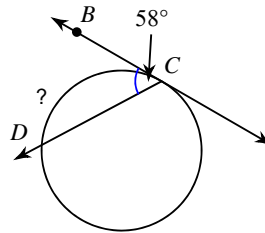


Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

13)

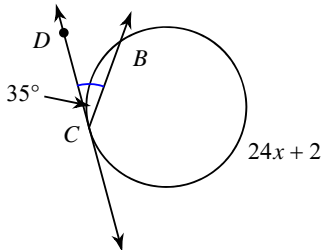


14)

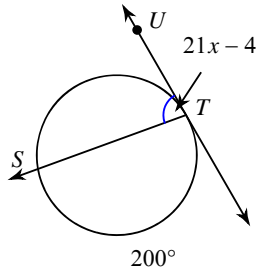


Solve for x . Assume that lines which appear tangent are tangent.

15)



16)

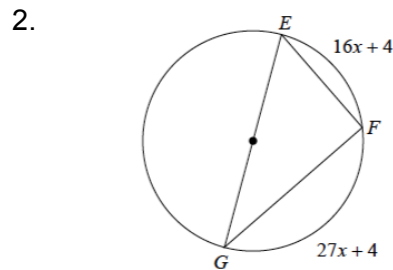
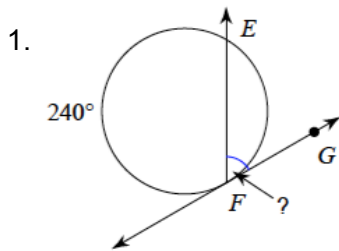


PACKET 11.3: INSCRIBED ANGLES

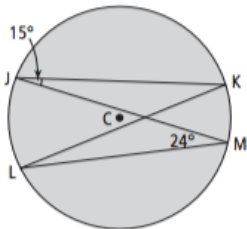
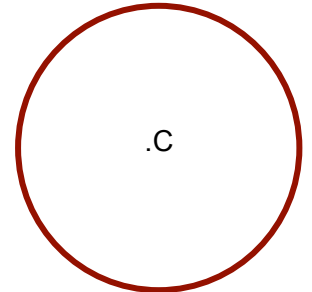
11.3 Application and Extension

Find $m\angle GEF$

Find the missing **angle**:



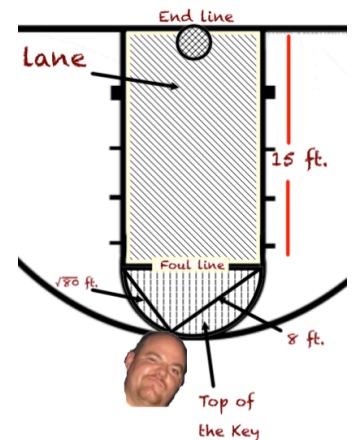
3. a. Draw a regular hexagon inscribed within the circle C to the right:
 b. Find the measure of each arc created by the vertices of the hexagon.
 c. Using your answer to b., find the measure each interior angle of the hexagon.
 d. Check your answer to c. using the formula from Unit 5: $\frac{(n-2)180}{n}$



4. Find the measure of each angle:
 a) $\angle KLM$ b) $\angle JKL$
 c) $\angle JCL$ d) $\angle KCM$

4. Sully loves doing geometry in basketball. One day during practice, Sully is shooting free-throws from the foul-line when he notices the semicircle at the "top of the key." While standing on part of this semicircle, he measures the distance to each endpoint of the foul line to be $\sqrt{80}$ ft. and 8 ft.

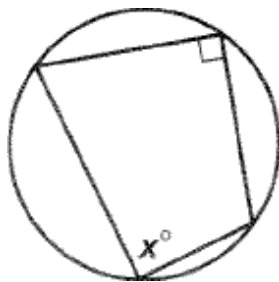
- a. Find the area of the "top of the key" (the semi circle at the top of the foul-line).
 b. If the foul-line is 15 ft. from the basket, find the area of the "lane" (the rectangular area from the foul-line to the endl ine).



Multiple Choice:

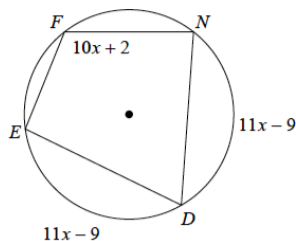
A quadrilateral is inscribed in the circle. What is the value of x?

- A. 90°
- B. 60°
- C. 45°
- D. 120°



Gridded Response:

Solve for x. Round to the nearest tenth, if necessary.

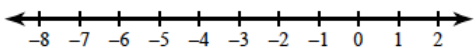


.	/	/	.
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Solve each equation for x!

1. Solve and graph.

$$-8 - 2x \geq -4(2 + 4x)$$



2. $2(n-3) = -4n - 6$

Factor Completely (Double factor)

3. $10p^2 + 16p - 8$

Factor!

4. $v^2 - 8v + 16$

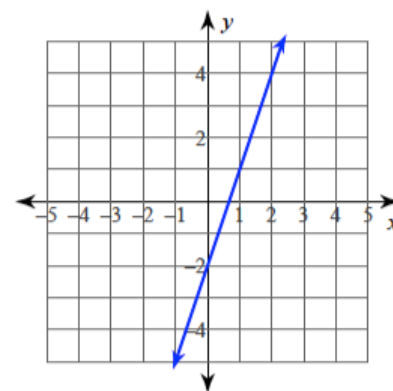
5. Solve the linear system by substitution:

$$\begin{aligned} y &= -6x + 10 \\ -x + 3y &= 11 \end{aligned}$$

6. Find the equation of the line:

m = _____

b = _____



Equation: _____