Name_____

Write your questions here!

Chords and Arcs

What is a ***chord***? _____

What is an ***arc***? _____

Key words: Chord, Arc, Central Angle, ⊥

What theorems exist involving chords and arcs?

Theorem #1: _____

_____

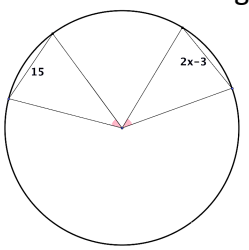
Theorem #2: _____

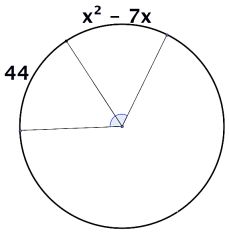
_____

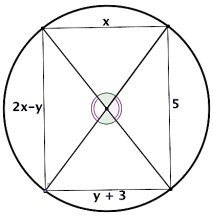
So what does this all mean?

Examples of Theorems #1 and #2

Solve for the missing variables:







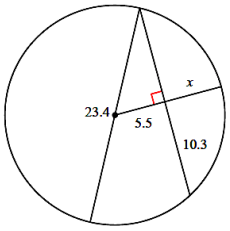
Write your questions here!

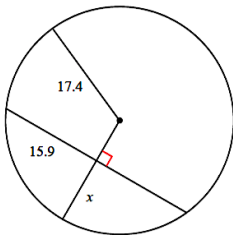
PACKET 11.2: CHORDS AND ARCS

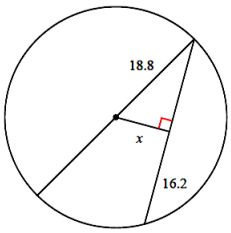
Theorem #3: _____

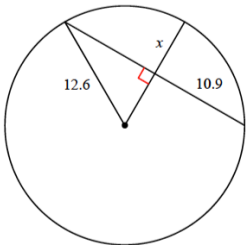
_____

Examples of Tangent Theorem #3 using Pythagorean Theorem:



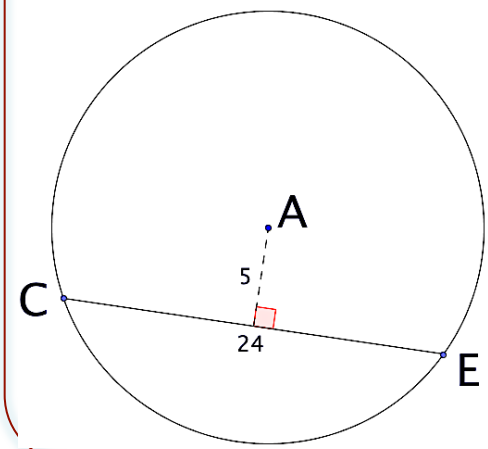






Tough stuff. Use your imagination.

Chord $\overline{CE}$ is 24in. long and 5 in. from the center of ⊙A. Find the radius of ⊙A and $m\widehat{CE}$. Round to the nearest tenth, if necessary.



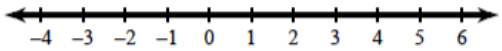
Now, summarize your notes here!

Algebra Review

Solve each equation for x!

1. Solve and graph.

1) $2(2n+3) < -n+16$



2. $-3(-2b+1) = -3-4b$

Factor Completely (Double factor)

3. $6x^2 - 2x - 8$

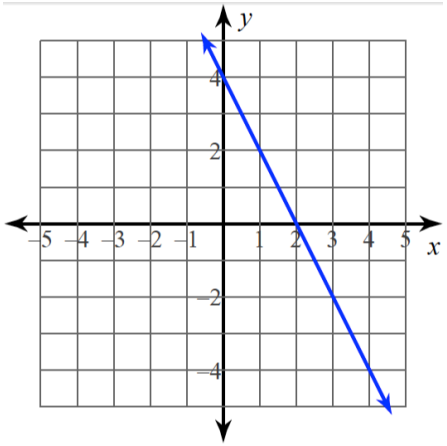
Factor!

4. $d^2 + 10d + 25$

5. Solve the linear system by substitution:

$y = -5x - 18$
$7x + 5y = -18$

6. Find the equation of the line:



m = _____

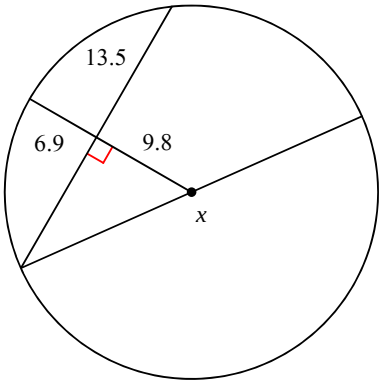
b = _____

Equation: _____

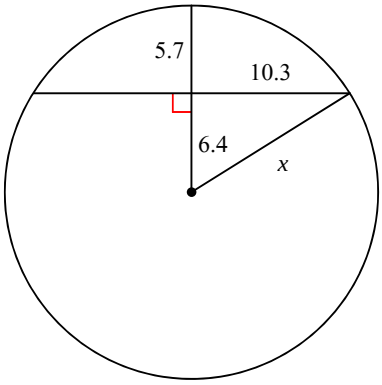
Practice 11.2

Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.

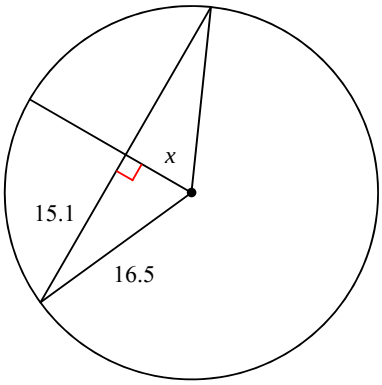
1)



2)



3)



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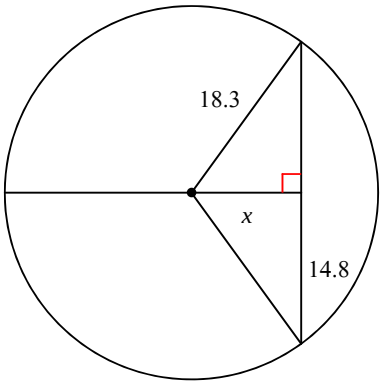

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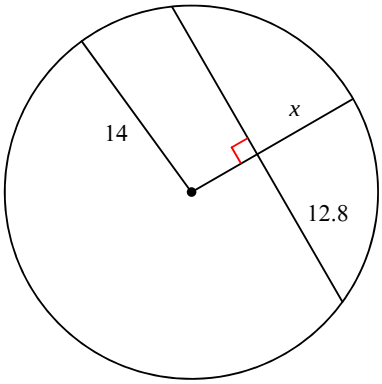
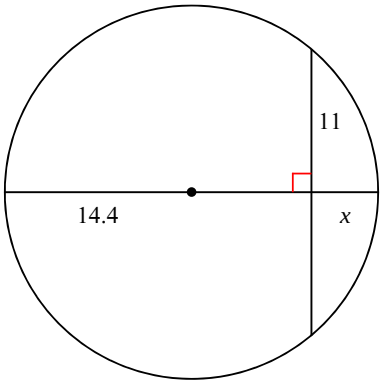


6)



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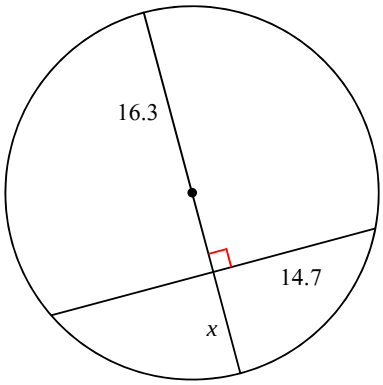

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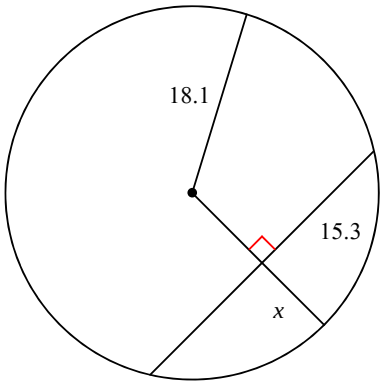

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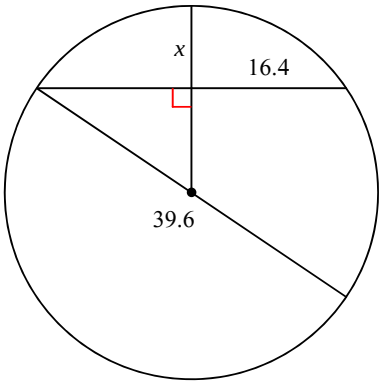
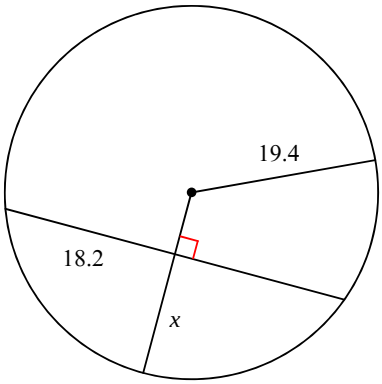
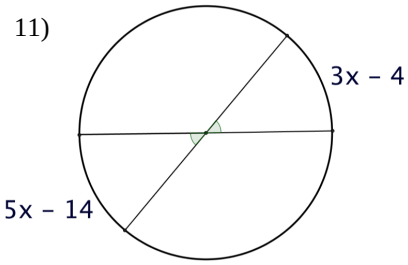


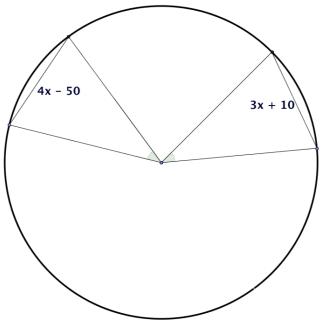
10)



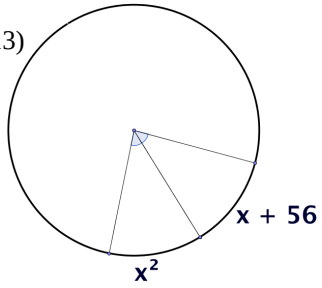
11)



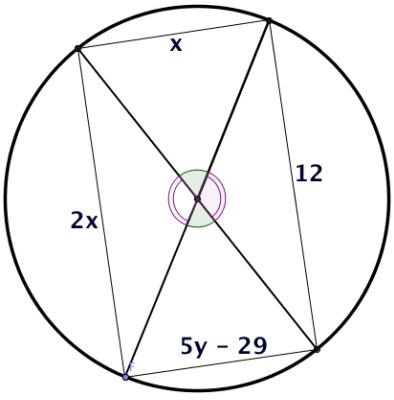
12)



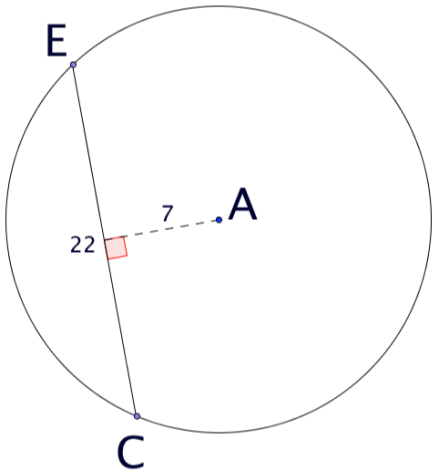
13)



14) Solve for x and y! (Hint: Use substitution!)

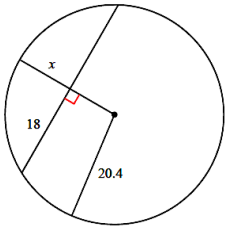


15) Find the measure of arc $\overset{\frown}{EC}$.

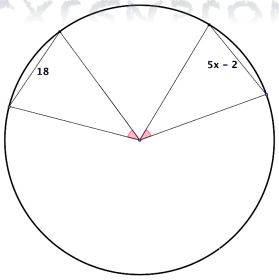


11.2 Application and Extension

1. Find the missing ***variable***:



2. Solve for x:



3. Circles that share the same center are called concentric circles. Two concentric circles have radii of 4cm and 8cm. A segment is drawn so that it is tangent to the smaller circle and a chord of the larger circle. How long is the segment? (Hint: Draw a picture and use your special right triangles!)

4. A chord of 48 cm is 7 cm from the center of a circle. Calculate the area of the circle.

5. The Algebros go on vacation to Mathachusetts when they find a really cool lighthouse. Sully and Brust wonder how much area on the water the lighthouse can cover. To figure it out, they each row out in a boat until the light is no longer visible. They figure the light can travel 3 miles. Then, while remaining at three miles from the lighthouse, they each row away from each other until they find the complete angle of rotation. If the angle of rotation is 124°, how much area does the lighthouse cover?

   How far away from each other are Brust and Sully?

Multiple Choice:	Gridded Response:
The diameter of a circle is 25cm and a chord of the same circle is 16cm. To the nearest tenth, what is the distance of the chord from the center of the circle? A. 9.0 cm B. 18.0 cm C. 9.6 cm D. 18.0 cm	Solve for x. Round to the nearest tenth, if necessary.