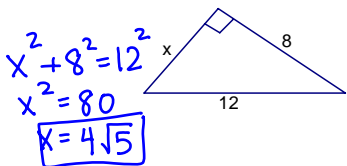


Geometry Chapter 9 Study Guide: Circles

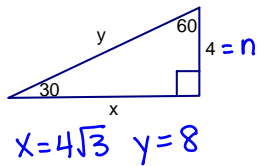
Key

Necessary Skills: Pythagorean Theorem and Special Right Triangles. Solve for x and y

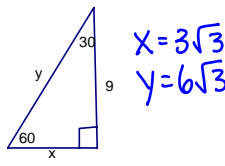
1.)



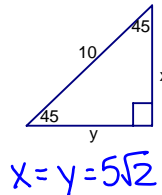
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3.)

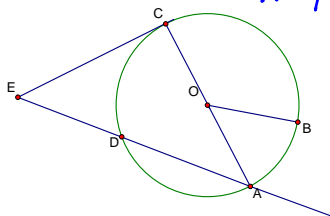


4.)



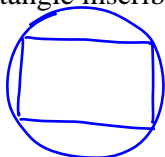
Key Vocabulary: Name one example of each

- 5.) a. radius \overline{OB}
- b. diameter \overline{CA}
- c. chord \overline{DA}
- d. secant \overline{DA}
- e. tangent \overline{EC}
- f. point of tangency C
- g. central angle $\angle BOA$
- h. inscribed angle $\angle DAC$
- i. minor arc \overline{AB}
- j. major arc \overline{ABD}

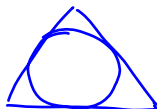


6.) Draw each:

a. A rectangle inscribed in a circle



b. A triangle circumscribed about a circle



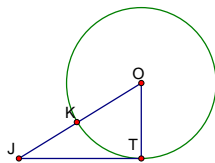
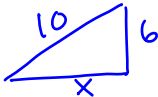
Tangents:

7.) Complete: JT is tangent to the circle at T

a.) If OT = 4, JO = 12, then JT = $8\sqrt{2}$

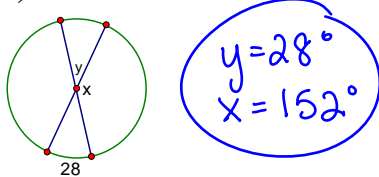
b.) If $m\angle J = 30^\circ$ and JT = 12, JO = $8\sqrt{3}$, OT = $4\sqrt{3}$

c.) If JK = 4 and KO = 6, then JT = 8

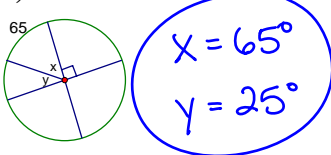


Central and Inscribed Angles: Solve for x and y

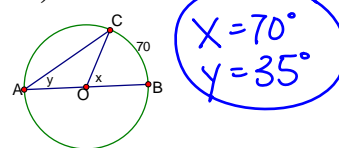
8.)



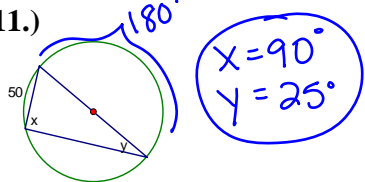
9.)



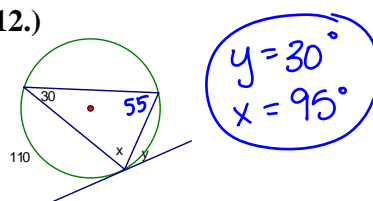
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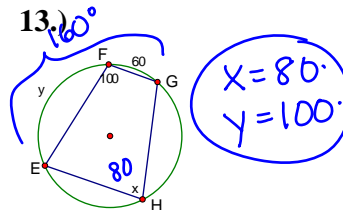
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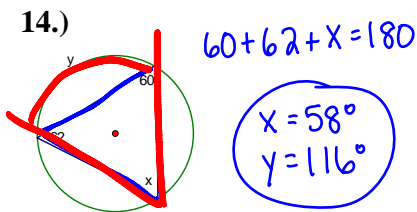
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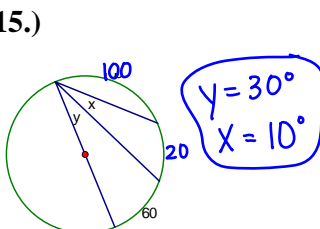
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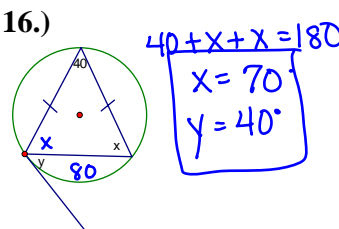
14.)



15.)

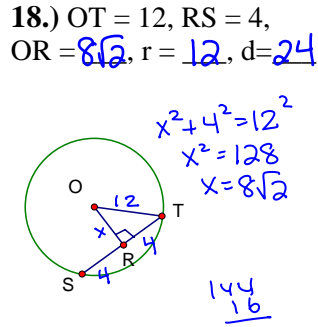
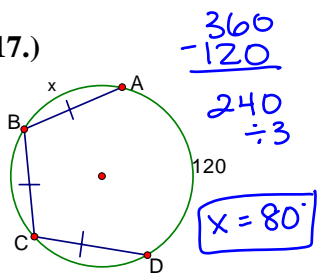


16.)

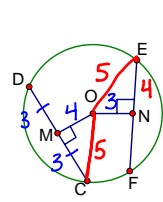


Chords and Arcs:

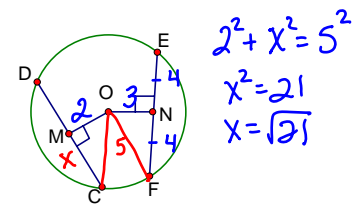
17.)



19.) $CD=6, OM=4,$
 $ON=3, EF=8, r=5, d=10$

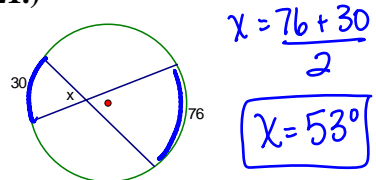


20.) $EF=8, ON=3,$
 $OM=2, CD=2\sqrt{21}$

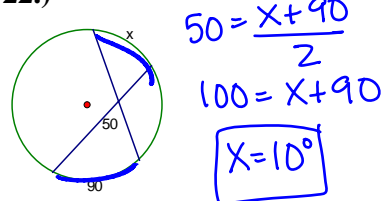


Interior and Exterior Angles: Solve for x

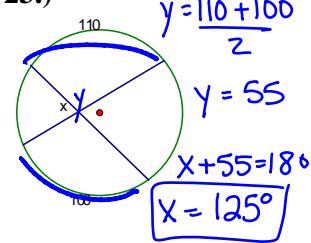
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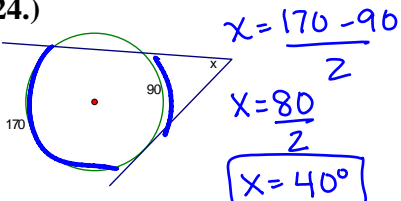
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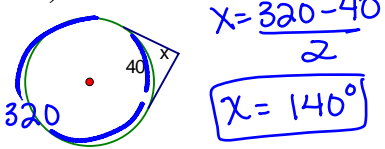
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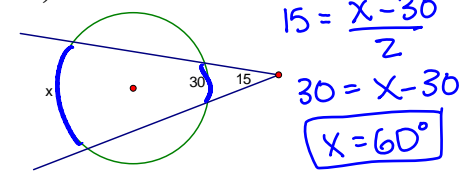
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25.)

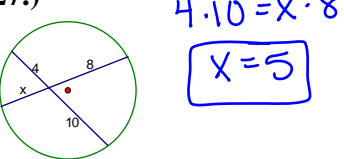


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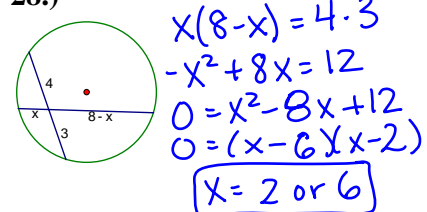


Segments and Lengths: Solve for x

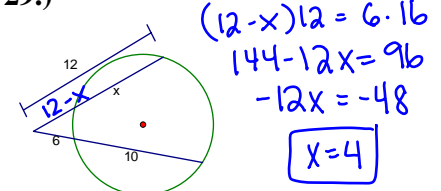
27.)



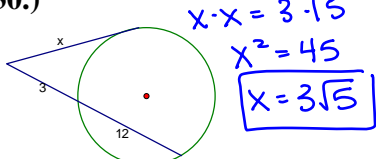
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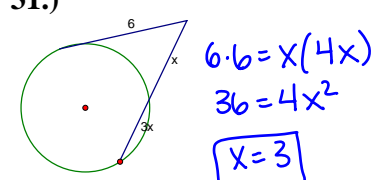
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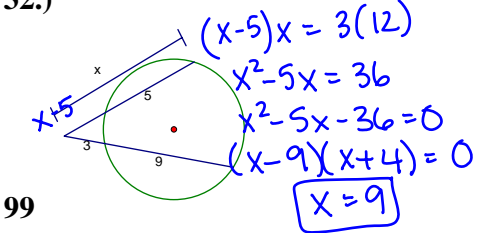
30.)



31.)



32.)



Algebra:

Factor Completely

33.) $x^4 - 16 = (x^2 + 4)(x^2 - 4) = (x^2 + 4)(x - 2)(x + 2)$

34.) $x^3 + x^2 - 25x - 25 = (x + 1)(x - 5)(x + 5)$

Solve by Factoring

35.) $x^2 - 7x = 0$
 $x(x - 7) = 0$ $x = 0, 7$

36.) $3x^2 + 3x - 5 = x^2 - 2x - 2$
 $2x^2 + 5x - 3 = 0$ $x = 1/2, -3$
 $(2x - 1)(x + 3) = 0$

Wkst

- | | | |
|------|------|------|
| 1) B | 4) D | 7) B |
| 2) A | 5) C | 8) B |
| 3) C | 6) A | |