

5/2
WED

STUDY GUIDE

FOLDABLES™	VOCABULARY PUZZLEMAKER	BUILD YOUR VOCABULARY
Use your Chapter 14 Foldable to help you study for your chapter test.	To make a crossword puzzle, word search, or jumble puzzle of the vocabulary words in Chapter 14, go to: www.glencoe.com/sec/math/t_resources/free/index.php	You can use your completed Vocabulary Builder (pages 270–271) to help you solve the puzzle.

14-1

Inscribed Angles

In circle P , \overline{AC} is a diameter; $m\widehat{CD} = 68$ and $m\widehat{BE} = 96$. Find each of the following.

1. $m\angle ABC$

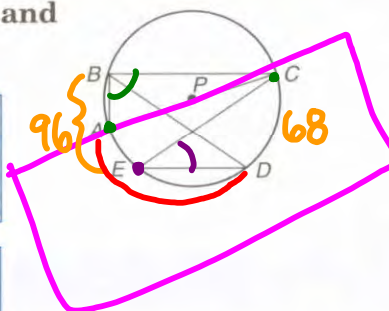
$180 \div 2 = 90^\circ$
Semicircle

2. $m\angle CED$

$68 \div 2 = 34^\circ$

3. $m\widehat{AD}$

$180 - 68 = 112^\circ$



In circle A , \overline{HE} is a diameter.

4. If $m\angle HTC = 52$, find $m\widehat{CH}$.

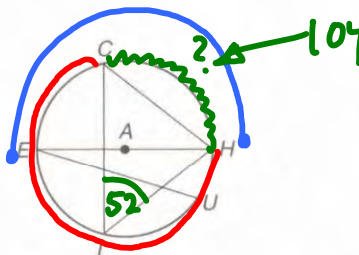
$52 \cdot 2 = 104^\circ$

5. Find $m\widehat{HCE}$.

180°

6. If $m\angle HTC = 52$, find $m\widehat{CEH}$.

$360 - 104 = 256^\circ$

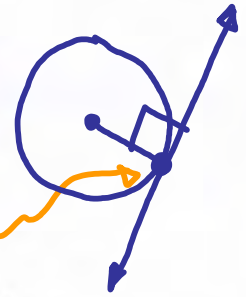


14-2

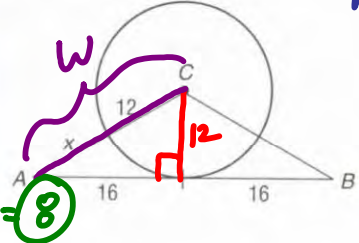
Tangents to a Circle

Underline the best term to complete the statement.

7. If a line is tangent to a circle, then it is perpendicular to the radius drawn to the point of tangency vertex].
- * 8. \overline{AB} is tangent to circle C . Find the value of x .

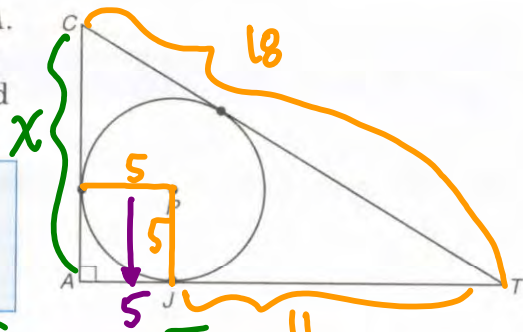


$$\begin{aligned}
 w^2 &= 16^2 + 12^2 \\
 w^2 &= 256 + 144 \\
 w^2 &= 400 \\
 w &= \sqrt{400} = 20 \\
 x &= 20 - 12 = 8
 \end{aligned}$$



9. Circle P is inscribed in right $\triangle CTA$. Find the perimeter of $\triangle CTA$ if the radius of circle P is 5, $CT = 18$, and $JT = 11$.

$$\begin{aligned}
 x^2 + 16^2 &= 18^2 \\
 x^2 + 256 &= 324 \\
 x^2 &= 68 \\
 x &= \sqrt{68}
 \end{aligned}$$



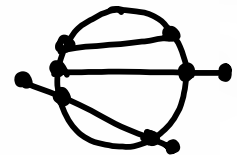
perimeter: $\sqrt{68} + 16 + 18 = 34 + \sqrt{68} = 34 + 2\sqrt{17}$

14-3

Secant Angles

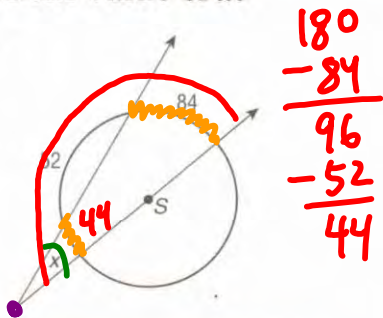
Underline the best term to complete the statement.

10. A radius secant segment is a line segment that intersects a circle in exactly two points.



Find the value of x .

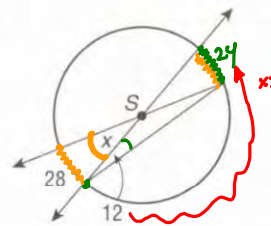
11.



$$\begin{array}{r}
 180 \\
 -84 \\
 \hline
 96 \\
 -52 \\
 \hline
 44
 \end{array}$$

$$x = \frac{84 - 44}{2} = \frac{40}{2} = 20$$

12.



$$x = \frac{28 + 24}{2} = \frac{52}{2} = 26$$

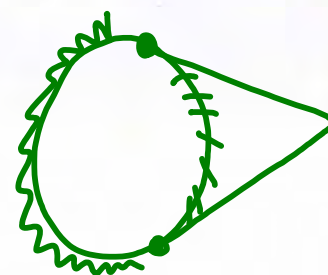
14-4

Secant-Tangent Angles

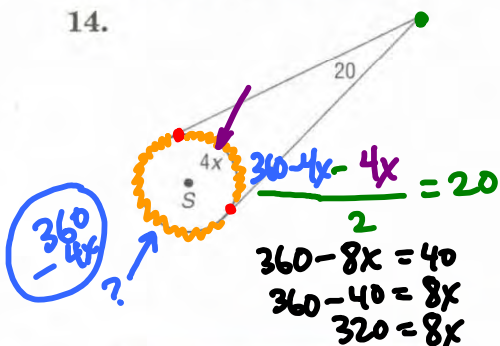
Underline the best term to complete the statement.

13. The measure of a(n) tangent-tangent [tangent-tangent/inscribed] angle is always one-half the difference of the measures of the intercepted arcs.

Find the value of x . Assume that segments that appear to be tangent are tangent.

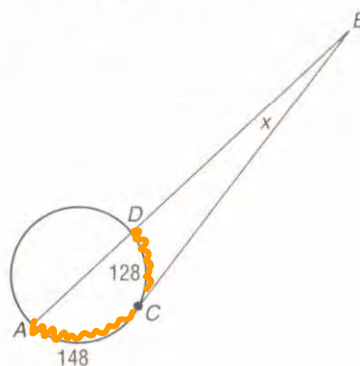


14.



$x = 40$

15.

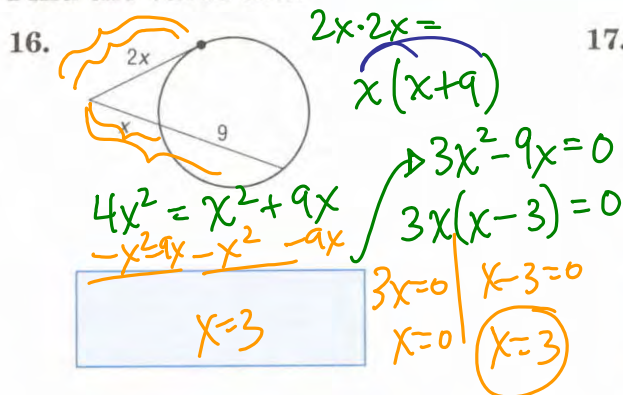


$\frac{148 - 128}{2} = \frac{20}{2} = 10$

14-5

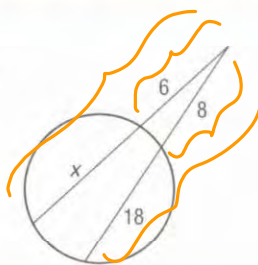
Segment Measures

Find the value of x .



$x = 3$

17.



$28 \frac{2}{3}$

$6(6+x) = 8(8+18)$
 $36+6x = 8 \cdot 26$
 $36+6x = 208$
 $6x = 172$
 $x = 28 \frac{2}{3}$

14-6

Equations of Circles

18. Write the equation of the circle with center $(-5, 9)$ and radius $2\sqrt{5}$.

$(x+5)^2 + (y-9)^2 = 20$

19. What are the coordinates of the center and length of the radius for the circle $(x+4)^2 + y^2 = 121$.

$c: (-4, 0) \quad r: 11$



Visit geomconcepts.com to access your textbook, more examples, self-check quizzes, and practice tests to help you study the concepts in Chapter 14.

ARE YOU READY FOR THE CHAPTER TEST?

Check the one that applies. Suggestions to help you study are given with each item.

I completed the review of all or most lessons without using my notes or asking for help.

- You are probably ready for the Chapter Test.
- You may want to take the Chapter 14 Practice Test on page 627 of your textbook as a final check.

I used my Foldable or Study Notebook to complete the review of all or most lessons.

- You should complete the Chapter 14 Study Guide and Review on pages 624–626 of your textbook.
- If you are unsure of any concepts or skills, refer back to the specific lesson(s).
- You may also want to take the Chapter 14 Practice Test on page 627.

I asked for help from someone else to complete the review of all or most lessons.

- You should review the examples and concepts in your Study Notebook and Chapter 14 Foldable.
- Then complete the Chapter 14 Study Guide and Review on pages 624–626 of your textbook.
- If you are unsure of any concepts or skills, refer back to the specific lesson(s).
- You may also want to take the Chapter 14 Practice Test on page 627.

Student Signature	Parent/Guardian Signature
Teacher Signature	