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FRI

STUDY GUIDE

FOLDABLES™	VOCABULARY PUZZLEMAKER	BUILD YOUR VOCABULARY
Use your Chapter 10 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 10, go to:  <a href="http://www.glencoe.com/sec/math/t_resources/free/index.php">www.glencoe.com/sec/math/t_resources/free/index.php</a>	You can use your completed Vocabulary Builder (pages 188–189) to help you solve the puzzle.

10-1

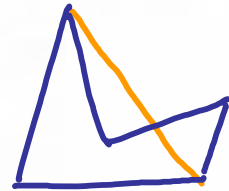
Naming Polygons

Indicate whether the statement is true or false.

- All the diagonals of a concave polygon lie on the interior.
- A regular polygon is both equilateral and equiangular.

false

true



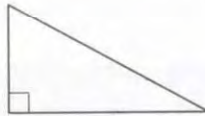
Identify each figure by its sides. Indicate if the polygon appears to be regular or not regular. If not regular, justify your reason.

3.



regular octagon

4.



triangle (not regular, not equilateral/equiangular)

10-2

Diagonals and Angle Measure

Find the sum of the measures of the interior angles.

5.



$(6-2)180$   
 $4(180)$

720°

6.



$(5-2)180$   
 $3(180)$

540

$(n-2)180$

Find the measure of one interior angle and one exterior angle of the regular polygon.

7. dodecagon

150, 30

8. decagon

144, 36

$\frac{360}{12}$

\* 9. The sum of the measures of four exterior angles of a pentagon is 280. What is the measure of the fifth exterior angle?

80

$360 - 280$

10-3

Areas of Polygons

Indicate whether the statement is true or false.

10. A polygon and its interior are known as a polygonal region.

true

Find the area of the polygon in square units.

11.



8 units<sup>2</sup>

12.



6 units<sup>2</sup>

10-4

Areas of Triangles and Trapezoids

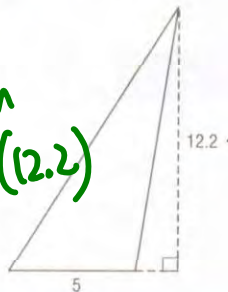
Indicate whether the statement is true or false.

13. The segment perpendicular to the parallel bases of a trapezoid is a median.

false

Find the area of the triangle or trapezoid.

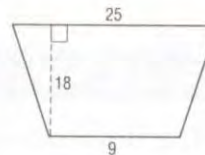
14.



$A = \frac{1}{2}bh$   
 $= \frac{1}{2}(5)(12.2)$

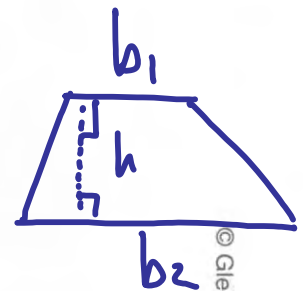
30.5 units<sup>2</sup>

15.



$A = \frac{1}{2}h(b_1 + b_2)$   
 $\frac{1}{2} \cdot 18(25 + 9)$

306 units<sup>2</sup>



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height

16. Find the area of a trapezoid whose altitude measures 4.5 cm and has bases measuring 6.2 and 8.8 cm.

33.75 cm<sup>2</sup>

$A = \frac{1}{2}h(b_1 + b_2)$   
 $= \frac{1}{2}(4.5)(6.2 + 8.8)$

17. What is the area of a triangle with base length  $6\frac{1}{3}$  in. and height 2 in.?

$6\frac{1}{3}$  in<sup>2</sup>

$A = \frac{1}{2}bh$   
 $\frac{1}{2}(6\frac{1}{3})(2)$

10-5

Areas of Regular Polygons

18. Find the area of a regular 11-sided polygon with each side measuring 7 cm and an apothem length of 11.9 cm.

458.15 cm<sup>2</sup>

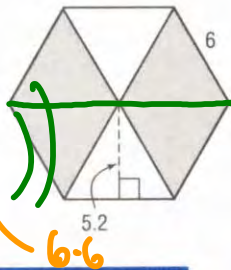
$A = \frac{1}{2}(11.9)(77)$

$A = \frac{1}{2}aP$

19. Find the area of the shaded region.

62.4 units<sup>2</sup>

$\frac{4}{6}(\frac{1}{2}(5.2)(36))$



10-6

Symmetry

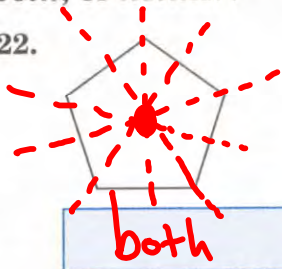
Underline the best term to make the statement true.

20. When a line is drawn through a figure and makes each half a mirror image of the other, the figure has line [line rotational] symmetry.

21. When a figure looks exactly as it does in its original position after being turned less than 360° around a fixed point, it has [line rotational] symmetry.

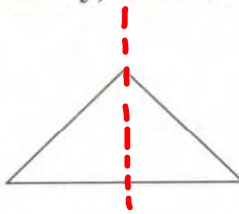
Determine whether the figure has *line symmetry*, *rotational symmetry*, *both*, or *neither*.

22.



both

23.



line

10-7

Tessellations

Identify the tessellation as *regular*, *semi-regular*, or *neither*.

24.



Semi-regular

25.



neither



Visit [geomconcepts.com](http://geomconcepts.com) to access your textbook, more examples, self-check quizzes, and practice tests to help you study the concepts in Chapter 10.

## 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 10 Practice Test on page 449 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 10 Study Guide and Review on pages 446–448 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 10 Practice Test on page 449 of your textbook.

- 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 10 Foldable.
  - Then complete the Chapter 10 Study Guide and Review on pages 446–448 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 10 Practice Test on page 449 of your textbook.

Student Signature	Parent/Guardian Signature
Teacher Signature	