

## Geometry Study Guide

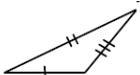


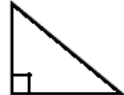

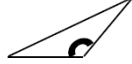
Name \_\_\_\_\_ Date \_\_\_\_\_

**Match the word with the correct definition.**

_____	1. polygon	a. a polygon that has all sides and angles equal
_____	2. triangle	b. a five-sided polygon
_____	3. quadrilateral	c. a ten-sided polygon
_____	4. pentagon	d. a polygon in which NOT all sides and angles are equal
_____	5. hexagon	e. a six-sided polygon
_____	6. octagon	f. a four-sided polygon
_____	7. decagon	g. a closed figure with straight sides
_____	8. regular polygon	h. an eight-sided polygon
_____	9. irregular polygon	i. a three-sided polygon

### TRIANGLES

Write the name of the triangle in box.

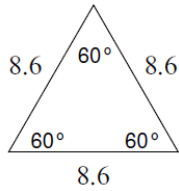
Sides			Angles		
10.		no congruent side	13.		all acute angles
11.		two congruent sides	14.		one right angle
12.		all congruent sides	15.		one obtuse angle

16. How many right angles can a triangle have? \_\_\_\_\_

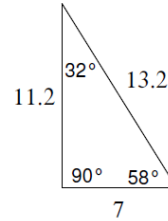
17. How many obtuse angles can a triangle have? \_\_\_\_\_

Classify the triangles based on their sides and angles.

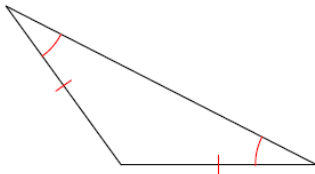
18. \_\_\_\_\_



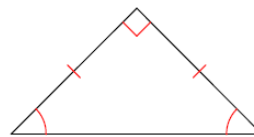
19. \_\_\_\_\_



20. \_\_\_\_\_



21. \_\_\_\_\_



### QUADRILATERALS

quadrilateral – 4 sides, 4 angles, 4 vertices

trapezoid – at least 1 set of parallel sides

parallelogram – 2 pairs of parallel sides, opposite sides are congruent

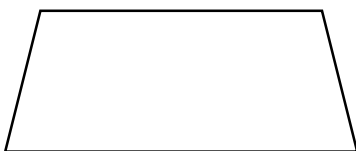
rectangle – 2 pairs of parallel sides, opposite sides are congruent, 4 right angles

rhombus – 2 pairs of parallel sides, 4 congruent sides

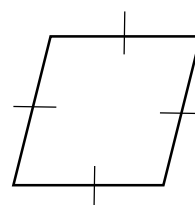
square – 2 pairs of parallel sides, 4 congruent sides, 4 right angles

Identify each shape

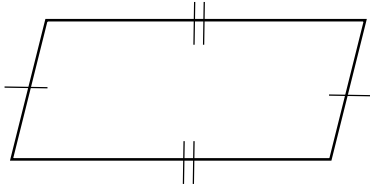
22. \_\_\_\_\_



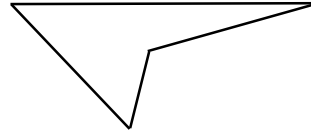
23. \_\_\_\_\_



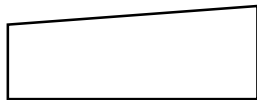
24. \_\_\_\_\_



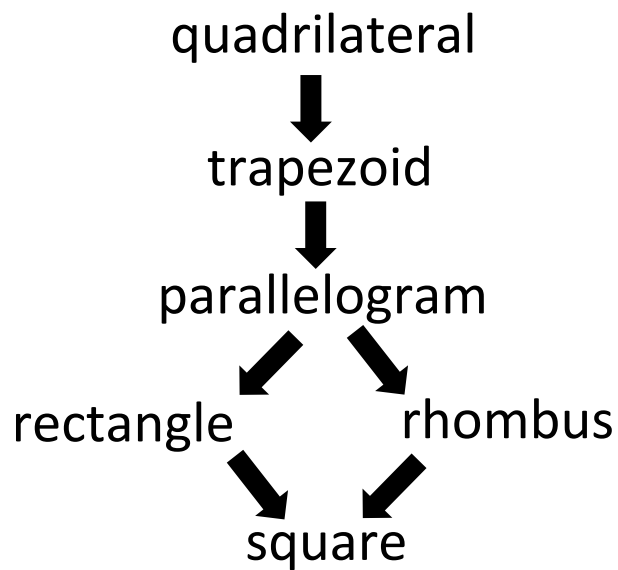
25. \_\_\_\_\_



26. \_\_\_\_\_



27. \_\_\_\_\_



Use the diagram above to help you answer the questions.

STATEMENT	TRUE	FALSE
28. All rectangles are quadrilaterals.		
29. A rhombus is always a square.		
30. All trapezoids are parallelograms.		
31. All parallelograms are trapezoids.		
32. A trapezoid is sometimes a square.		
33. A parallelogram is sometimes a rhombus.		
34. A square is always a rectangle.		
35. A trapezoid is sometimes a square.		

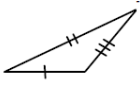


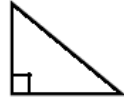

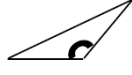
## Geometry Study Guide – ANSWER KEY

Match the word with the correct definition.

<b>G</b>	1. polygon	a. a polygon that has all sides and angles equal
<b>I</b>	2. triangle	b. a five-sided polygon
<b>F</b>	3. quadrilateral	c. a ten-sided polygon
<b>B</b>	4. pentagon	d. a polygon in which NOT all sides and angles are equal
<b>E</b>	5. hexagon	e. a six-sided polygon
<b>H</b>	6. octagon	f. a four-sided polygon
<b>C</b>	7. decagon	g. a closed figure with straight sides
<b>A</b>	8. regular polygon	h. an eight-sided polygon
<b>D</b>	9. irregular polygon	i. a three-sided polygon

### TRIANGLES

Write the name of the triangle in box.

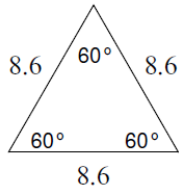
Sides			Angles		
10. <b>SCALENE TRIANGLE</b>		no congruent side	13. <b>ACUTE TRIANGLE</b>		all acute angles
11. <b>ISOSCELES TRIANGLE</b>		two congruent sides	14. <b>RIGHT TRIANGLE</b>		one right angle
12. <b>EQUILATERAL TRIANGLE</b>		all congruent sides	15. <b>OBTUSE TRIANGLE</b>		one obtuse angle

16. How many right angles can a triangle have? **1**

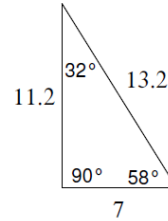
17. How many obtuse angles can a triangle have? **1**

Classify the triangles based on their sides and angles.

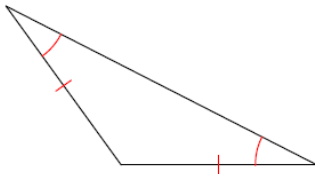
18. **acute, equilateral triangle**



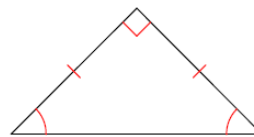
19. **right, scalene triangle**



20. **obtuse, isosceles triangle**



21. **right, isosceles triangle**



## QUADRILATERALS

quadrilateral – 4 sides, 4 angles, 4 vertices

trapezoid – at least 1 set of parallel sides

parallelogram – 2 pairs of parallel sides, opposite sides are congruent

rectangle – 2 pairs of parallel sides, opposite sides are congruent, 4 right angles

rhombus – 2 pairs of parallel sides, 4 congruent sides

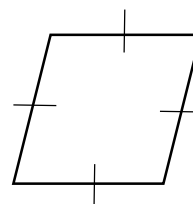
square – 2 pairs of parallel sides, 4 congruent sides, 4 right angles

Identify each shape

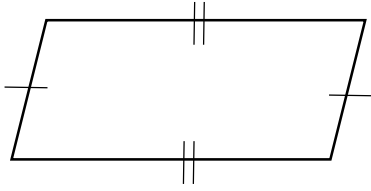
22. **trapezoid**



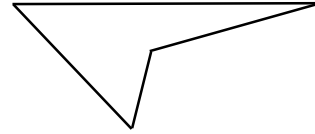
23. **rhombus**



24. **parallelogram**



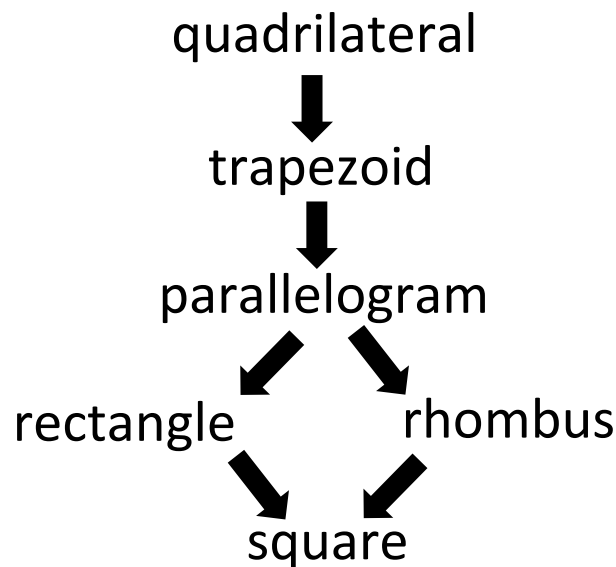
25. **quadrilateral**



26. **trapezoid**



27. **rectangle**



Use the diagram above to help you answer the questions.

STATEMENT	TRUE	FALSE
18. All rectangles are quadrilaterals.	X	
19. A rhombus is always a square.		X
20. All trapezoids are parallelograms.		X
21. All parallelograms are trapezoids.	X	
22. A trapezoid is sometimes a square.	X	
23. A parallelogram is sometimes a rhombus.	X	
24. A square is always a rectangle.	X	
25. A trapezoid is sometimes a square.	X	