

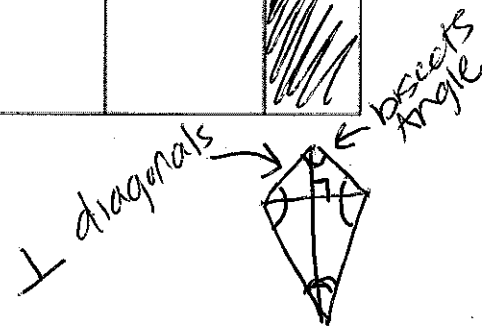
Name: ANSWER KEY Date: _____ Period: _____

Integrated Advanced Algebra
Quadrilateral Graphic Organizer
Textbook: Lesson 5.12, Pages 329 & 330

Directions: Mark the boxes below quadrilaterals that have each listed property.

Property	Parallelogram	Rectangle	Rhombus	Square	Trapezoid	Isosceles Trapezoid	Kite
1. Both pairs of opposite sides are congruent	/	/	/	/			
2. Diagonals are perpendicular			/	/			/
3. Has four sides	/	/	/	/	/	/	/
4. Both pairs of opposite angles are congruent	/	/	/	/			
5. Diagonals are congruent		/		/		/	
6. All angles are right angles		/		/			
7. Both pairs of opposite sides are parallel	/	/	/	/			
8. All pairs of consecutive angles are supplementary	/	/	/	/			
9. Each diagonal bisects two opposite angles			/	/			
10. Diagonals bisect each other	/	/	/	/			
11. Base angles are congruent						/	
12. Only one pair of parallel sides					/	/	
13. Exactly 2 pairs of consecutive sides are congruent							/

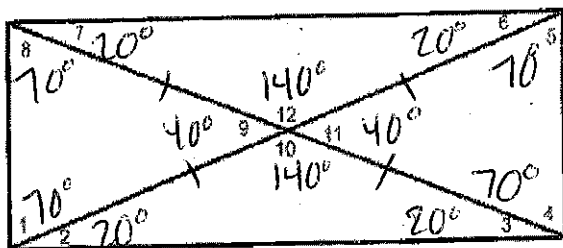
1 diagonal bisects angles
 1 diagonal



Answer Key

Use the rectangle below to answer the following questions:

$m\angle 1$ is 70° find all other angles.



- | | | |
|---------------------------|---------------------------|-----------------------------|
| a. $m\angle 1 = 70^\circ$ | e. $m\angle 5 = 70^\circ$ | i. $m\angle 9 = 40^\circ$ |
| b. $m\angle 2 = 20^\circ$ | f. $m\angle 6 = 20^\circ$ | j. $m\angle 10 = 140^\circ$ |
| c. $m\angle 3 = 20^\circ$ | g. $m\angle 7 = 20^\circ$ | k. $m\angle 11 = 40^\circ$ |
| d. $m\angle 4 = 70^\circ$ | h. $m\angle 8 = 70^\circ$ | l. $m\angle 12 = 140^\circ$ |

Polygon PONM is a rhombus.

7. If $MP = 2x + 5$ and $PO = 3x - 7$, then $MN =$ 29

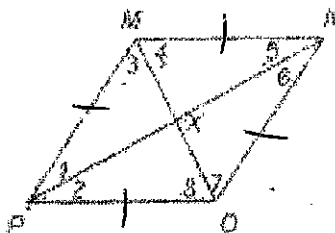
$$2x + 5 = 3x - 7 \quad x = 12 \quad 2(12) + 5$$

$$-x = -12$$

8. If $m\angle PXO = (2x + 6)^\circ$, then $x =$ 42

$$2x + 6 = 90$$

9. If $m\angle 3 = 44^\circ$, then $m\angle 6 =$ 46°



Use square DEFG to answer the following questions:

10. Label all the angles.

11. $DF = 5x - 9$, $GE = 3x + 19$, $x =$ 14

$$5x - 9 = 3x + 19$$

$$2x = 28$$

12. If $FG = 4x - 5$, $DG = 2x + 17$, then $DE =$ 39

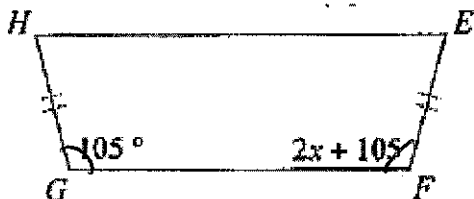
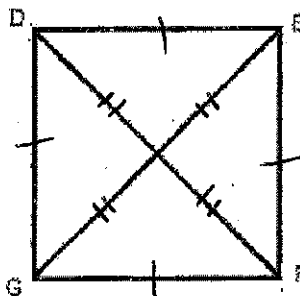
$$4x - 5 = 2x + 17$$

$$2x = 22$$

$$x = 11$$

$$4(11) - 5$$

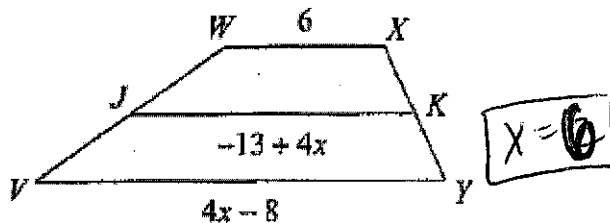
$$44 - 5$$



$$105 = 2x + 105$$

$$x = 0$$

* Base Angles \cong



$$x = 6$$

$$2 \cdot \frac{4x - 8 + 6}{2} = (-13 + 4x) \cdot 2$$

$$4x - 2 = -26 + 8x$$

$$-4x = -24$$