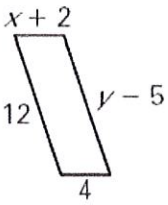
Name _____ Date _____

Day 2 – Properties of Rhombi, Squares, Trapezoids and Kites

Find the missing variable in each parallelogram.

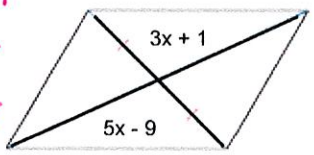
1.



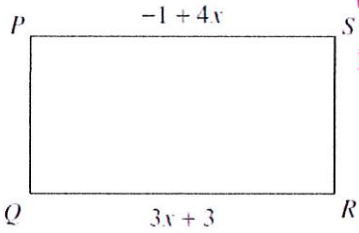
$y - 5 = 12$
$+5 \quad +5$
$y = 17$
$x + 2 = 4$
$-2 \quad -2$
$x = 2$

2.

$3x + 1 = 5x - 9$
$-5x \quad -5x$
$-2x + 1 = -9$
$-1 \quad -1$
$-2x = -10$
$-2 \quad -2$
$x = 5$



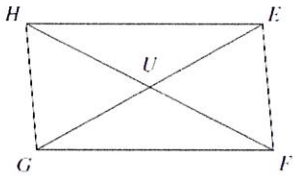
3.



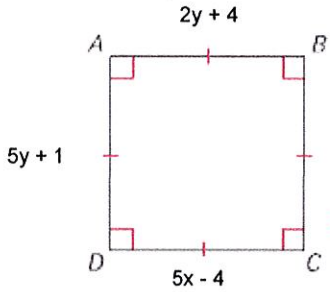
$3x + 3 = -1 + 4x$
$-x = -4$
$x = 4$

4.

$UH = 19$
$FH = 5x - 7$
$5x - 7 = 38$
$5x = 45$
$x = 9$



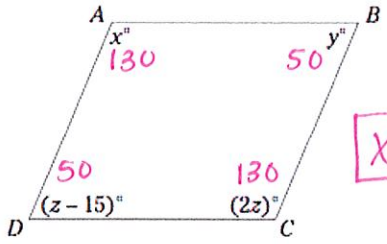
5.



$3x = 5x - 4$
$-5x \quad -5x$
$-2x = -4$
$x = 2$

$5y + 1 = 2y + 4$
$-2y \quad -2y$
$3y + 1 = 4$
$3y = 3$
$y = 1$

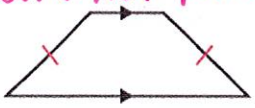
6.



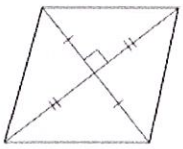
$2z + z - 15 = 180$
$3z - 15 = 180$
$3z = 195$
$z = 65$
$x = 130$ | $y = 50$

Decide if the figure is a parallelogram. If yes, can you identify the type of parallelogram? If it is not, explain why not.

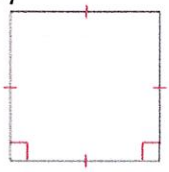
7. No, both sides are not parallel



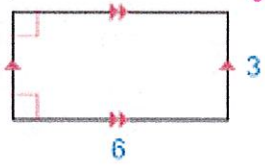
8. yes, rhombus



9) yes, square



10) yes, rectangle



11. Suppose points A (1, 2), B (3, 6), and C (6, 4) are three vertices of a parallelogram.

a. Give the coordinates of a point that could be the fourth vertex. Sketch the parallelogram in a coordinate plane.

(4, 0)

b. Explain how to check to make sure the figure you drew in part a is a parallelogram.

opposite sides are parallel (same slope)

c. How many different parallelograms can be formed using A, B, and C as vertices? Sketch each parallelogram and label the coordinates of the fourth vertex.

three