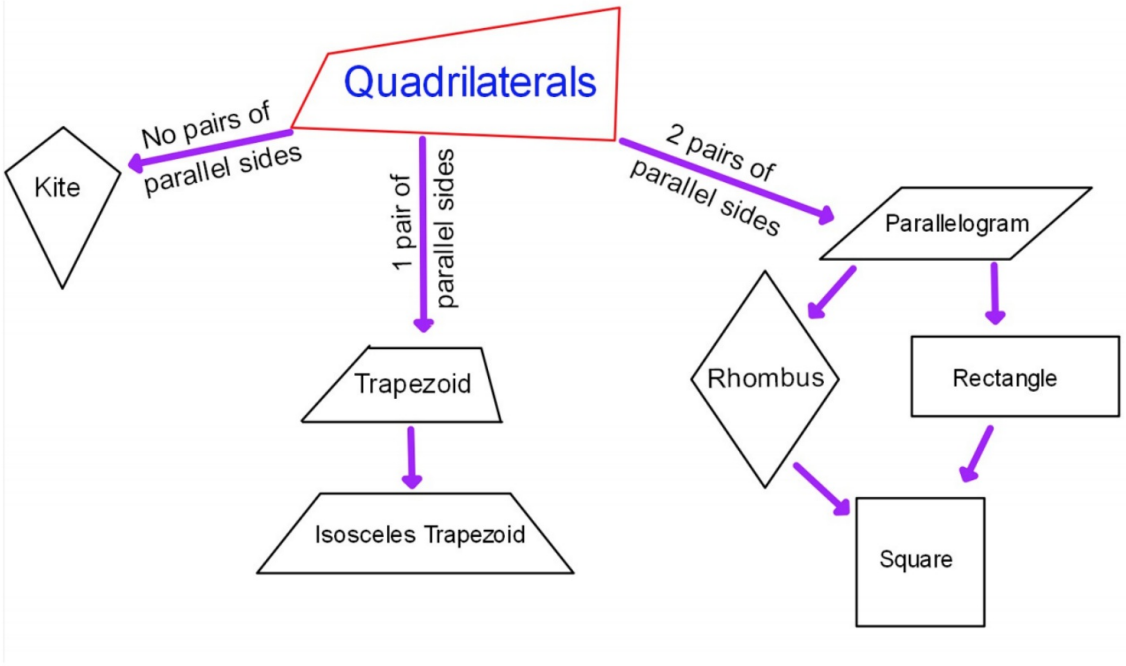


Characteristics of Special Quadrilaterals

Parallelogram: both pairs of opposite sides are parallel

Rhombus: a Parallelogram with 4 $\cong$ sides

Rectangle: a Parallelogram with 4 right angles

Square: a Parallelogram with 4 $\cong$ sides and 4 right angles

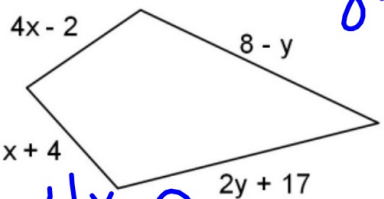
Kite: a Quadrilateral with two pairs of adjacent sides that are congruent and no opposite sides congruent.

Trapezoid: a Quadrilateral with exactly one pair of parallel sides (bases)

Isosceles Trapezoid: a Trapezoid whose nonparallel sides are congruent (legs)

Use the properties of special quadrilaterals to find the value of each variable.

1. This figure is a Kite.



$8 - y = 2y + 17$

$y = -3$

$x + 4 = 4x - 2$

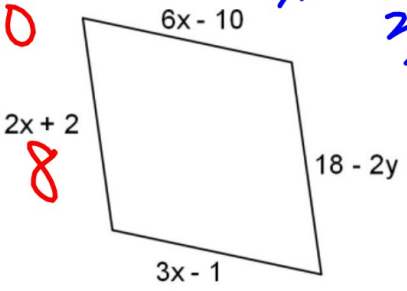
$4 = 3x - 2$

$6 = 3x$

x = 2

y = -3

2. This figure is a Rhombus



$6x - 10 = 3x - 1$

$3x - 10 = -1$

$3x = 9$

$x = 3$

$18 - 2y = 8$

$-2y = -10$

$y = 5$

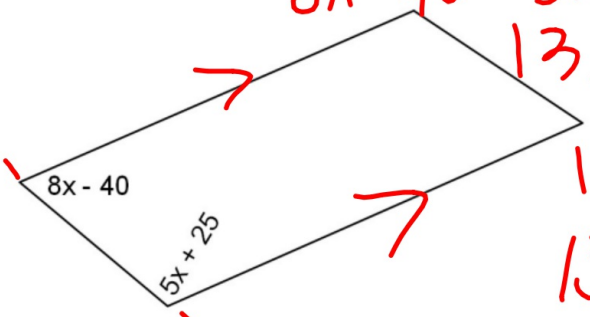
8

x = 3

y = 5

3. This figure is a Parallelogram.

x = 15



$8x-40+5x+25=180$

$13x-15=180$

$13x=180$

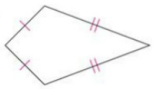
$13x=195$

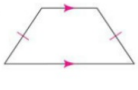
$x=15$

HW #2 Answers:

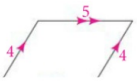
7. Square	8. Parallelogram	9. Rhombus	10. Rectangle
11. Kite	12. Trapezoid	20. x = 4; y = 6.8	24. y = 4; x = 5; 3
36. True	37. False	38. False	39. True
40. False	41. False		

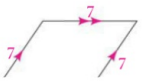
10. 

11. 

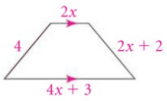
12. 

ine the most precise name for each quadrilateral.

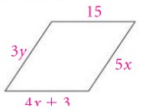
8. 

9. 

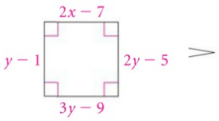
22. isosceles trapezoid



23. rhombus



24. square



State whether each statement is *true* or *false*. Justify your response. You may find the diagram from Exercise 35 helpful.

36. All squares are rectangles.

37. A trapezoid is a parallelogram.

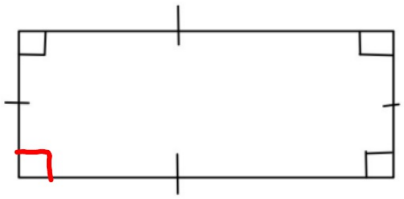
38. A rhombus can be a kite.

39. Some parallelograms are squares.

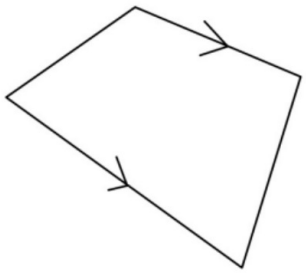
40. Every quadrilateral is a parallelogram.

41. All rhombuses are squares.

Give the best name for each figure.

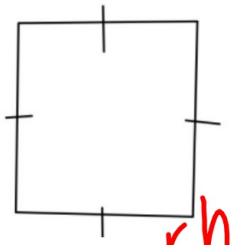


square

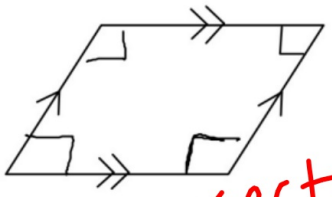


Trapezoid

Give the best name for each figure.

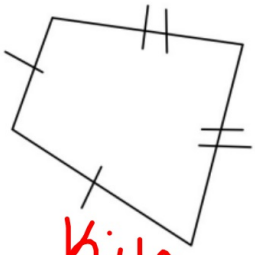


rhombus

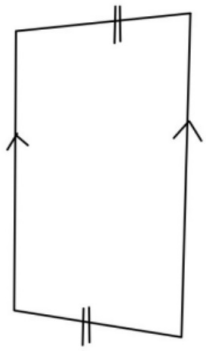


rectangle

Give the best name for each figure.

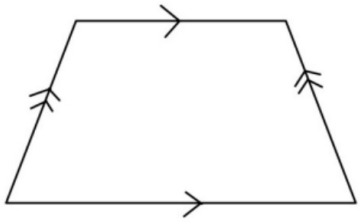


kite



Trapezoid

Give the best name for each figure.



11-gram

What is the best name for Quadrilateral ABCD?

A(8,20) B(24, -4) C(-12, -28) D(-28, -4)

$AB = \frac{-3}{2}$

$BC = 2/3$

$CD = -3/2$

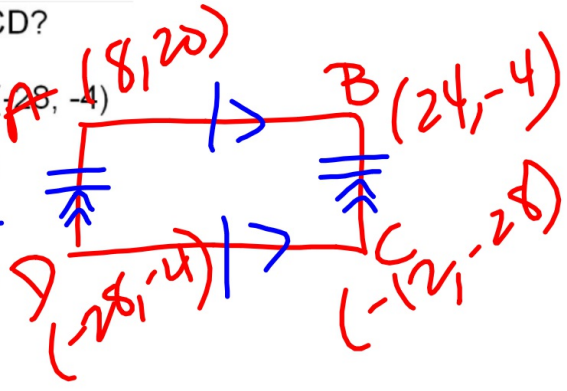
$DA = 2/3$

$\sqrt{832}$

$\sqrt{1872}$

$\sqrt{832}$

$\sqrt{1872}$



What is the best name for quadrilateral JKLM.

J(-3, -5) K(0, -11) L(7, -1) M(4, 5)

$JK = -2$ | $\sqrt{45}$

$KL = -10/7$ | $\sqrt{149}$

$LM = -2$ | $\sqrt{45}$

$MJ = 10/7$ | $\sqrt{149}$

parallelo-gram

Classwork: Practice 6.1 Worksheet

IXL #1 - N.1 & N.2 due Sunday at 4pm!