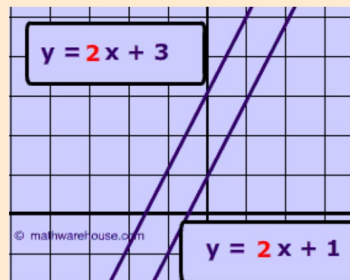


Welcome Back MYP Math 9!

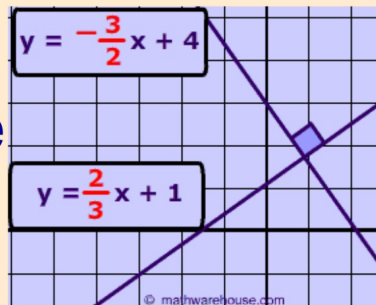
	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: 10/23 Topic: Create your own problem!	0 1 2	I'm almost done!
Tuesday Date: 10/24 Topic: Finished create your own problem	0 1 2	
Wednesday Date: 10/25 Topic: 8D Parallel and Perpendicular Lines	0 1 2	
Thursday Date: _____ Topic: _____	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

Warm-up: Record into your notes!

*Parallel Lines have the exact same slope.



*Perpendicular lines have slopes that are opposite reciprocal.

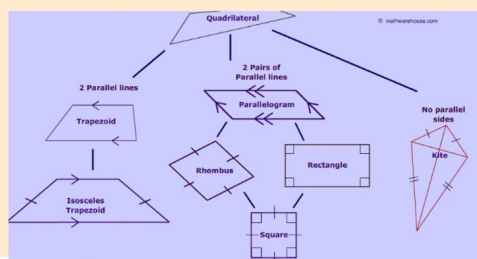


Class Plan:

1. Warm-up
2. Types of Quadrilaterals
3. Classify Quadrilaterals
using slopes of lines, and side
lengths!
4. Joke break!
5. Pass back Quiz 2.1

Classifying Quads:

Use the images below to fill in the blanks & draw an image!



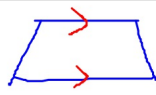



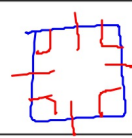
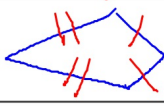
Quadrilateral (4 sided figure)	Definition	Image
Trapezoid	One pair of _____.	
Parallelogram	Two pairs of _____.	
Rhombus	Parallelogram with four _____.	
Rectangle	Parallelogram with four _____.	
Square	Parallelogram with four _____ and four _____.	
Kite	Two sets distinct pairs of _____.	

(4 min)

Classifying Quadrilaterals (4 sided Polygon)

Quadrilateral (4 sided figure)	Definition	Image
Trapezoid	One pair of _____.	
Parallelogram	Two pairs of _____.	
Rhombus	Parallelogram with four _____.	
Rectangle	Parallelogram with four _____.	
Square	Parallelogram with four _____ and four _____.	
Kite	Two pairs distinct pairs of _____.	

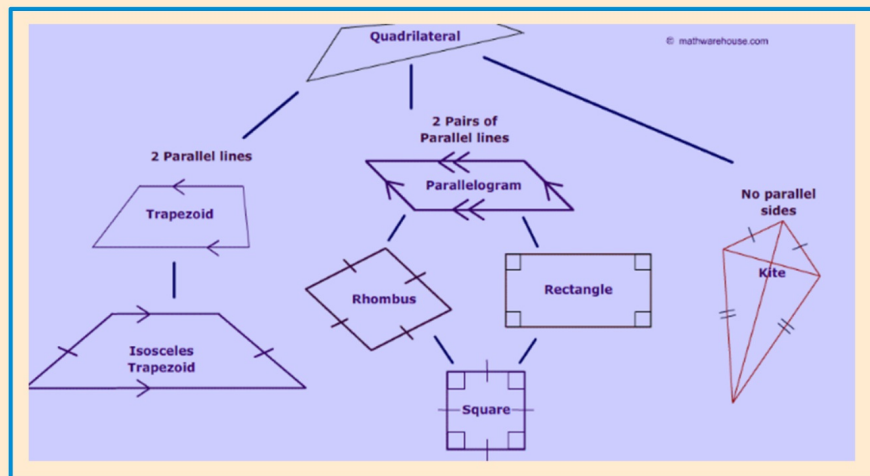
Classifying Quadrilaterals (4 sided Polygon)

Quadrilateral (4 sided figure)	Definition	Image
Trapezoid	One pair of <u>parallel sides</u> .	
Parallelogram	Two pairs of <u>parallel sides</u> .	
Rhombus	Parallelogram with four <u>congruent sides</u> .	
Rectangle	Parallelogram with four <u>right angles</u> .	
Square	Parallelogram with four <u>congruent sides</u> and four <u>right angles</u> .	
Kite	Two pairs distinct pairs of <u>congruent sides</u> .	

Practice: Classifying Quadrilaterals

Using parallel/perpendicular lines & length

- *** Graph vertices of the quadrilateral
- *** Solve for slopes/lengths of sides
- *** What type of quadrilateral is it???



Practice: Classifying Quadrilaterals

Quadrilateral HAND has vertices
H(-5, -1), A(7, 1), N(6, 7), and D(-6, 5).

Slopes

$$DH = -6$$

$$DN = \frac{10}{2} = 5$$

$$HA = \frac{12}{2} = 6$$

$$NA = -6$$

Lengths

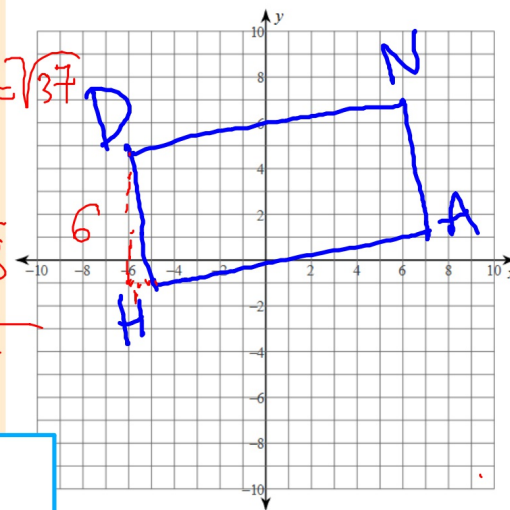
$$DH = \sqrt{1^2 + 6^2} = \sqrt{37}$$

$$DN = \sqrt{148}$$

$$HA = \sqrt{148}$$

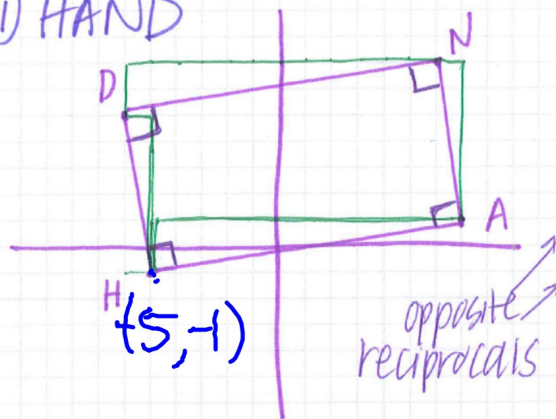
$$NA = \sqrt{37}$$

Rectangle



SOLUTION

① HAND



GRADIENTS

$$\overline{HD} = \frac{6}{-1} = -6$$

$$\overline{AN} = \frac{6}{-6} = -1$$

$$\overline{DN} = \frac{2}{12} = \frac{1}{6}$$

$$\overline{HA} = \frac{2}{12} = \frac{1}{6}$$

\overline{HD} is parallel to \overline{AN}

\overline{DN} is parallel to \overline{HA}

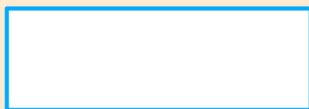
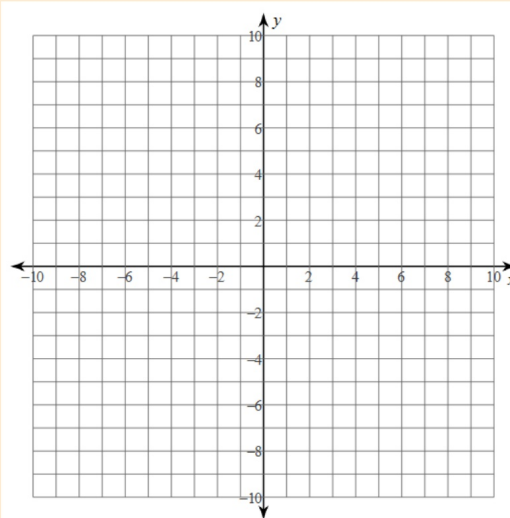
parallelogram
rectangle

Practice: Classifying Quadrilaterals

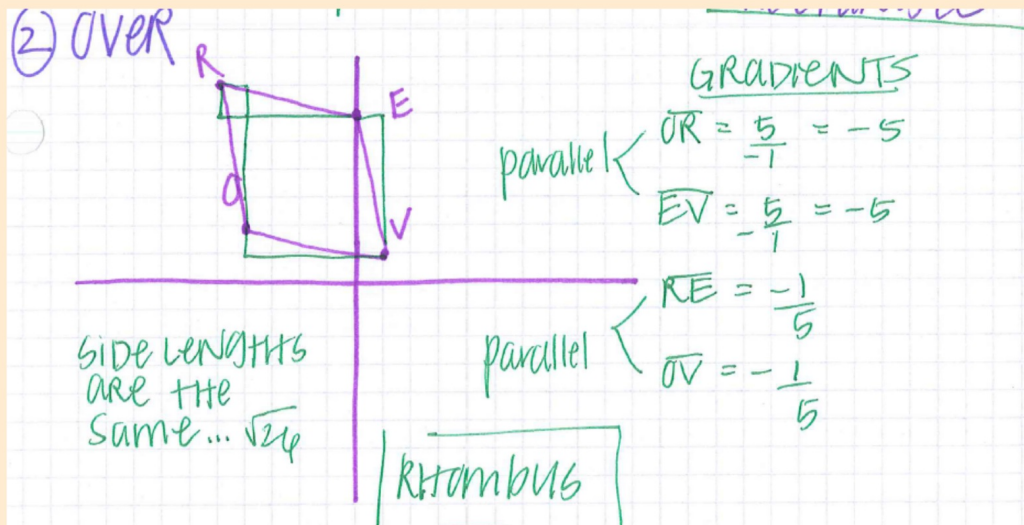
Quadrilateral OVER has vertices
O(-4, 2), V(1, 1), E(0, 6), and R(-5, 7).

Slopes

Lengths



SOLUTION

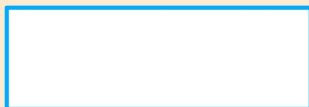
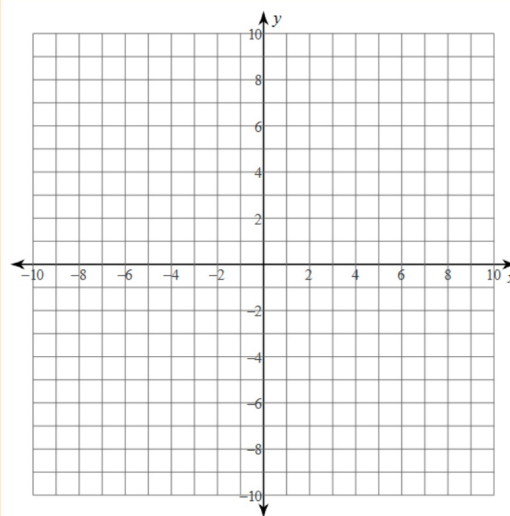


Practice: Classifying Quadrilaterals

Quadrilateral FROG has vertices
F(-1,2), R(-5,5), O(-8,1), and G(-4,-2)

Slopes

Lengths



SOLUTION

③ From $R(-5,5)$

all side lengths are 5

GRADIENTS

$$FR = \frac{3}{-4}$$
$$GO = \frac{3}{-4}$$
$$OR = \frac{4}{3}$$
$$GF = \frac{4}{3}$$

opposite reciprocals
↓
perpendicular

parallel

Parallel

square

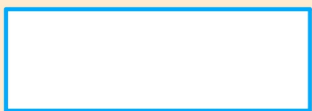
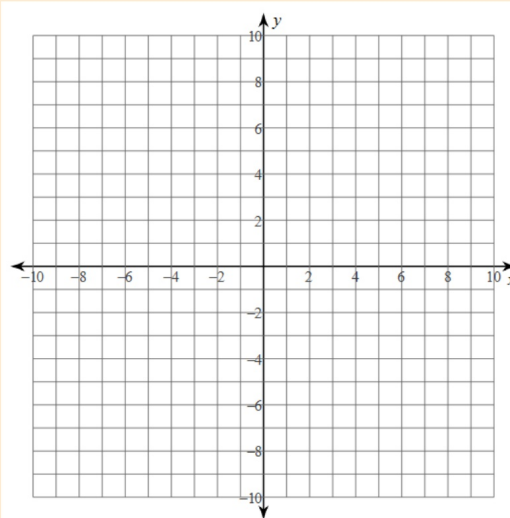
$$4^2 + 3^2 = c^2$$
$$16 + 9 = c^2$$
$$\sqrt{25} = c$$
$$5 = c$$

Practice: Classifying Quadrilaterals

Quadrilateral GOAT has vertices
G(3,3), O(-2,5), A(-6,1), T(-4,-4).

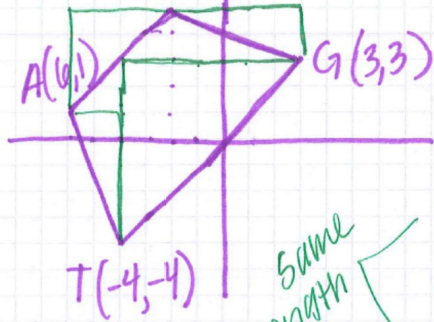
Slopes

Lengths



SOLUTION

(4) GOAT



(ISOSCELES)
TRAPEZOID

same
length

GRADIENTS

$$\overline{OG} = \frac{2}{-5}$$

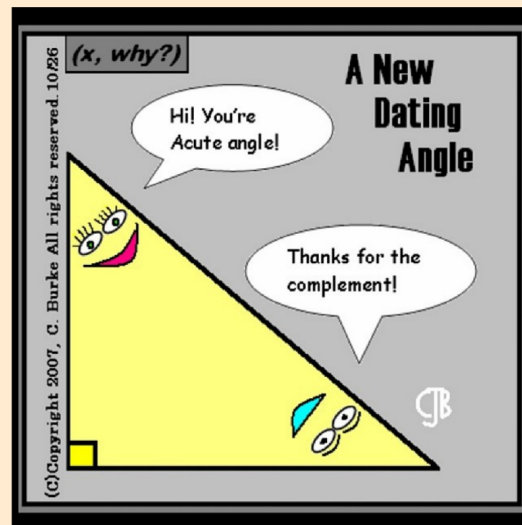
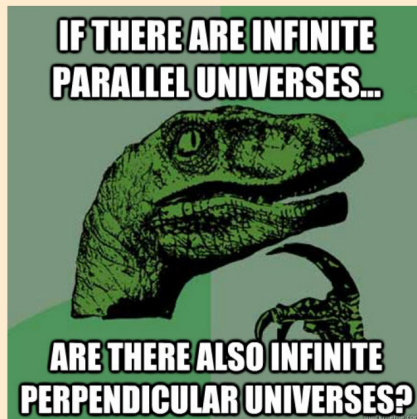
$$\overline{AO} = \frac{4}{4} = 1$$

$$\overline{TA} = \frac{5}{-2}$$

$$\overline{TG} = \frac{7}{7} = 1$$

} Parallel

Joke break!



Exercises...

Make Quiz 2.1 Corrections!

Unit Test (2nd try!)