Good afternoon: warm up in notebooks

1. Point A is located on the coordinate plane at (5,3). B is located at (-3,8). Find the coordinates of M, the midpoint of $\overline{AB}$.

2. F is located at (2,4) and G is located at (8,0). Find the exact length of $\overline{FG}$.

Reminders:
- Tutoring today 4-5p
- Reassess in DS Thurs,
or next week (any but Wed)
Fire alarm? Go left out door
down to 2nd level parking lot

Please get out your grade sheets as tests are being returned

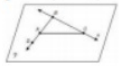
We won't use peer experts today, but look over what you missed with your table to see if you better understand the concepts.

Honors Geometry – 1st Quarter Assessment Grades Name:

Key: CO – Congruence GPE – Expressing Geometric Properties with Equations

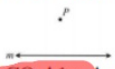
Most recent grade entered in Powerschool. Two consecutive scores of 3 *or higher required. Each standard is assessed in class at least twice. Re-taking an assessment requires proof of completed homework. Full standards on web at:* http://j.mp/tenngeometry

CO-A1a: Point/Lines/Planes: I know precise definition of line segment, based on the undefined notions of point, line, and distance along a line.



Date						
Score						

CO-A1b: Types of Lines: I know the precise definitions of parallel and perpendicular lines based on the undefined notions of point, line, and distance along a line.



Date						
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CO-A1c: Angles and Circles: I know precise definitions of angles and circles, based on the undefined notions of point, line, and distance along a line, and distance around a circular arc.

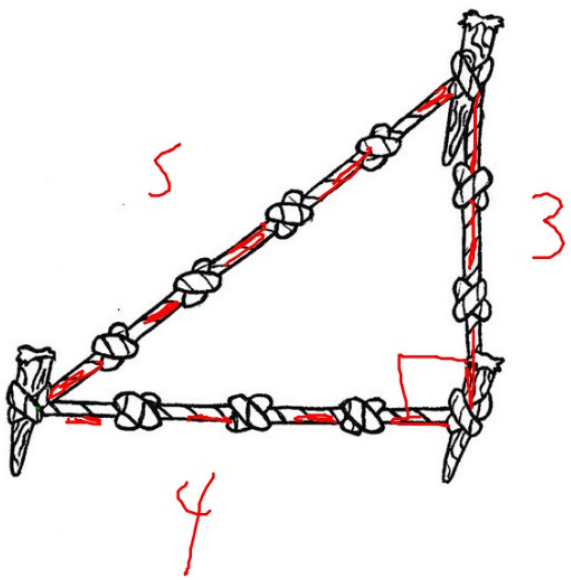
Date						
Score						

CO-D12a: Constructions 1: I can make formal geometric constructions including: copying segment and angle, midpoint, perpendicular bisector, and angle bisector.

Date						
Score						

GPE-B6a: Partitioning a Segment: I can find the point on a directed line segment between two given points that partitions the segment in a given ratio.

Pythagorean Theorem: a brief (re)introduction



$a^2+b^2=c^2$

if and only if $\Leftrightarrow$

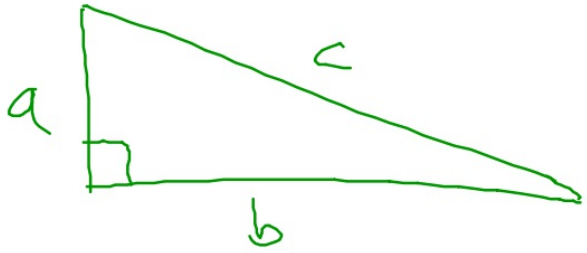
a, b, and c are the sides of a right triangle

and c is the hypotenuse.

(the side across from 90°)

If it rains, then I carry an umbrella.

A 13 foot ladder is propped up against a wall.
The base of the ladder is 5 feet away from the base of the wall.
How high up the wall does the top of the ladder reach?



$$a^2 + b^2 = c^2$$

A handy tip to avoid trouble when finding distance **p. 55 #26**

Use a right triangle!!

Use the Distance Formula to show that $\overline{AB} \cong \overline{CD}$. – AND –

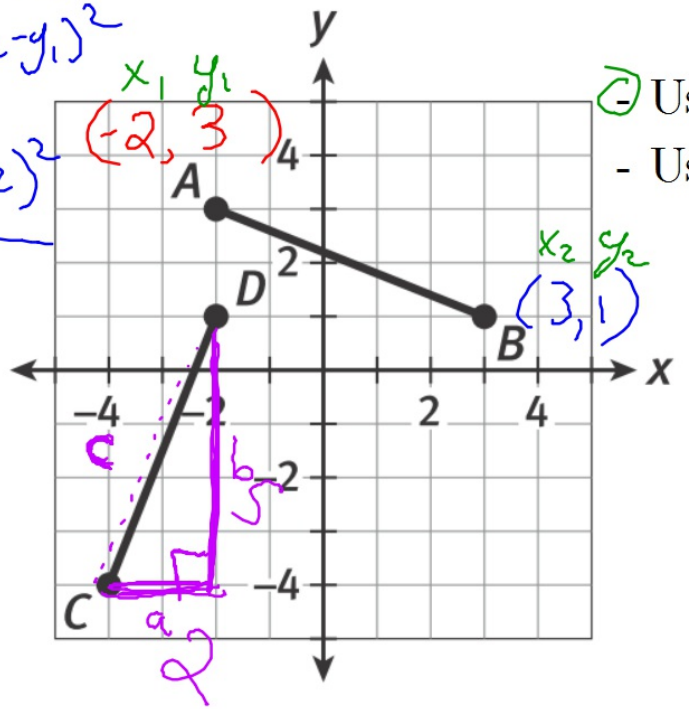
$d = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$

$\sqrt{(1-3)^2 + (3--2)^2}$

$\sqrt{(-2)^2 + (5)^2}$

$\sqrt{4+25}$

$\sqrt{29}$



1. Use distance formula for AB
2. Use right triangle for CD

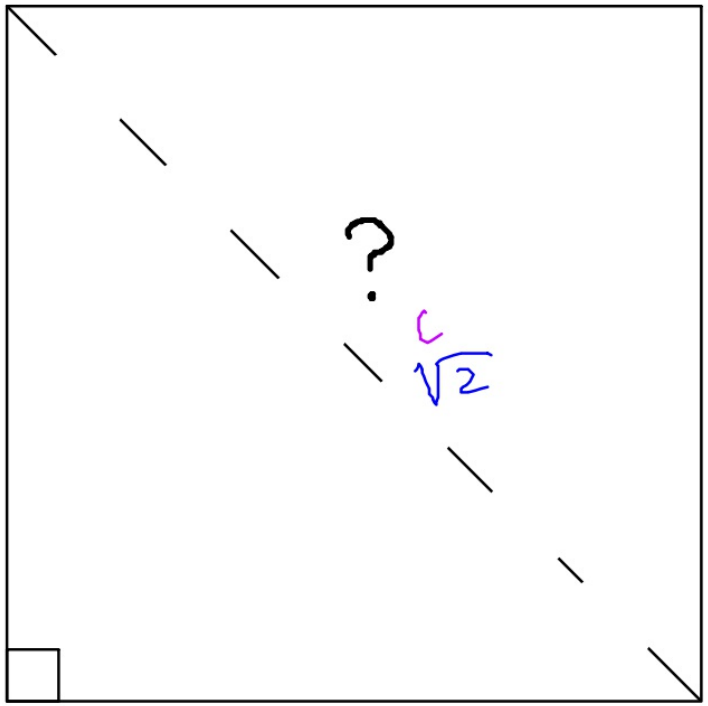
$a^2 + b^2 = c^2$

$2^2 + 5^2 = c^2$

$4 + 25 = c^2$

$\sqrt{29} = \sqrt{c^2}$

$\sqrt{29} = c$



$$a^2 + b^2 = c^2$$

$$1^2 + 1^2 = c^2$$

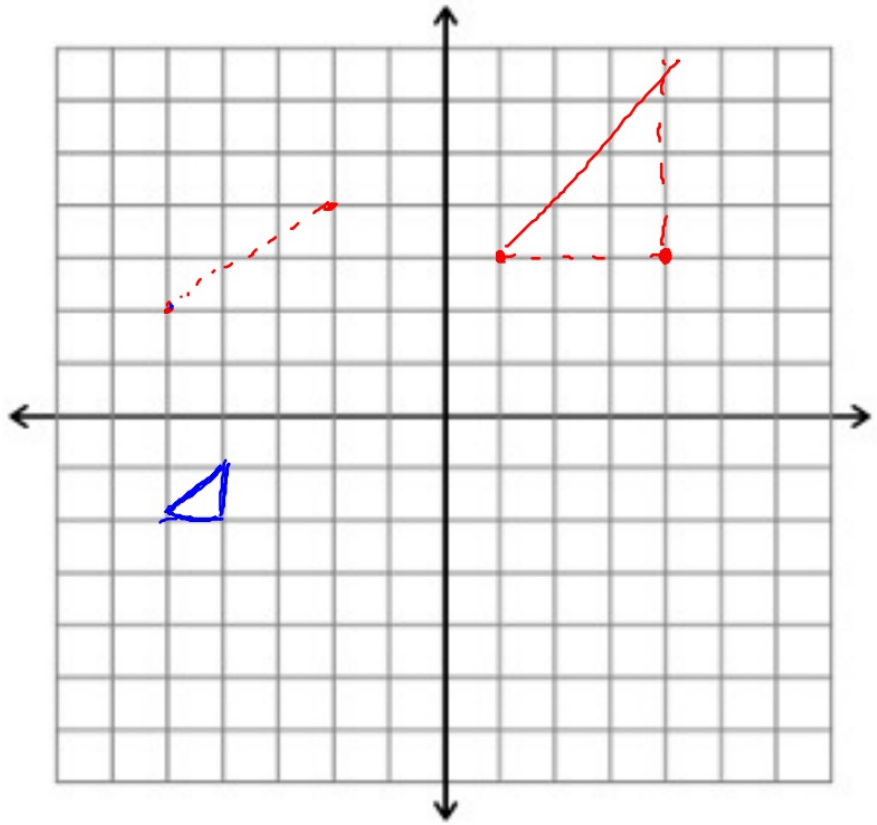
$$1 + 1 = c^2$$

$$\sqrt{2} = \sqrt{c^2}$$

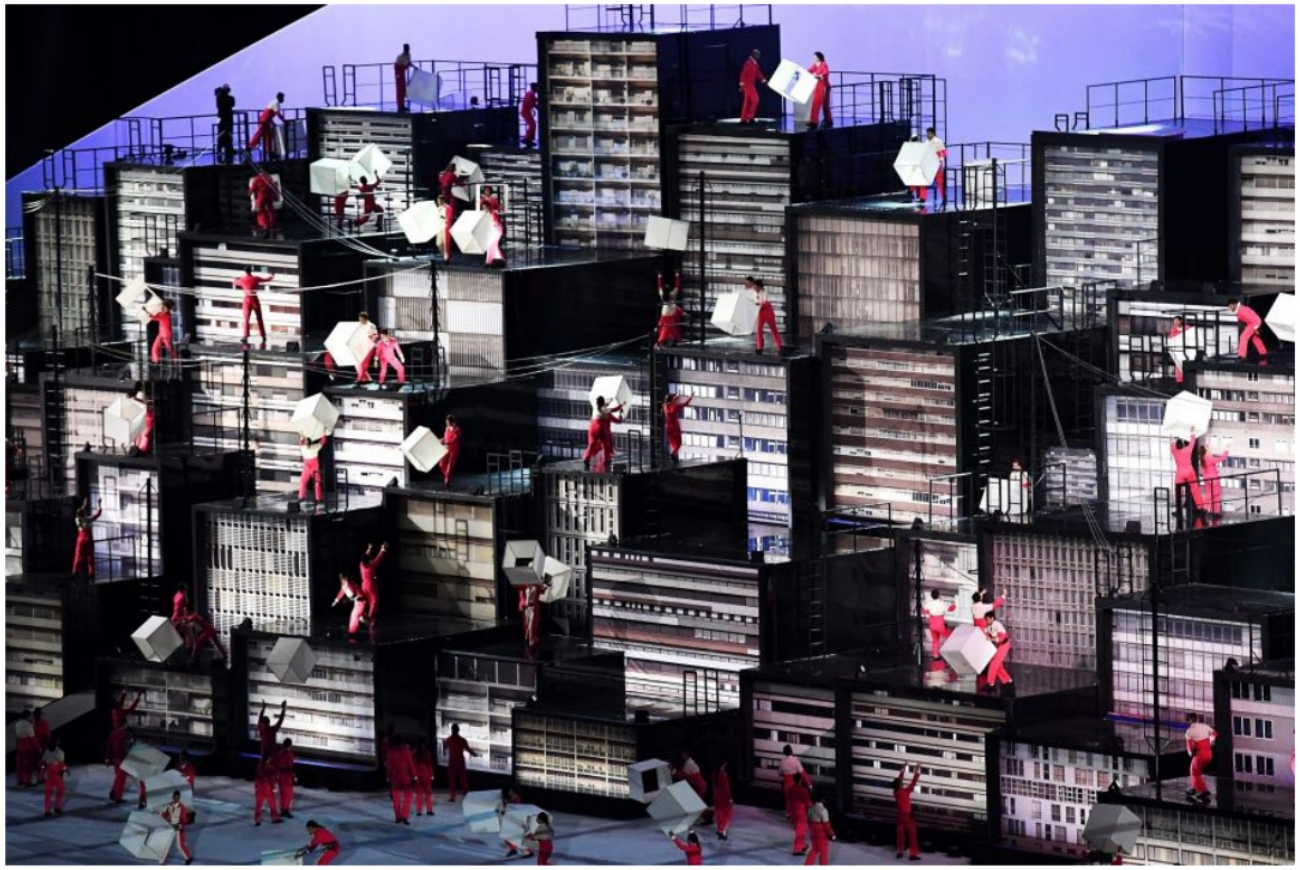
$$\sqrt{2} = c$$

Because diagonal distance is irrational (not a fraction or whole number) you cannot reliably count diagonally on the coordinate plane!

only up/down or left/right

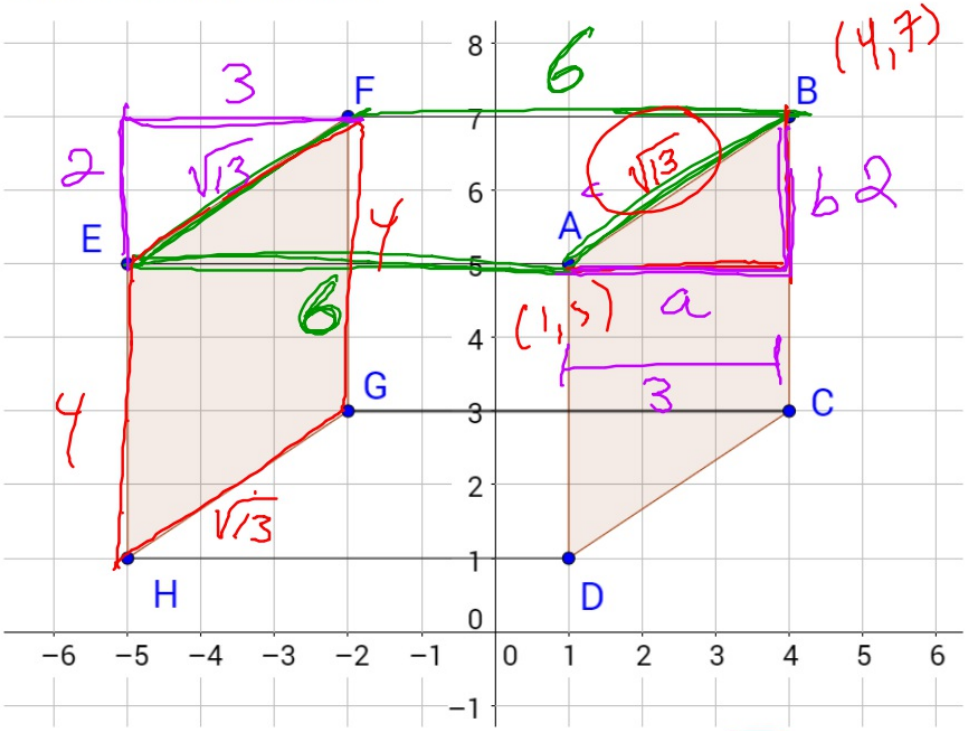


You are designing props to be used in a show, and one is a box that dancers use as part of their act.



https://www.youtube.com/watch?v=ASG_dr3a9ec

Since this is 2D representation of a 3D figure, some information is lost.



$\sqrt{13} + \sqrt{13} + 4 + 4 \approx 15.2$

Calculate the perimeter of quadrilateral ABFE.

$3^2 + 2^2 = c^2$

$9 + 4 = c^2$

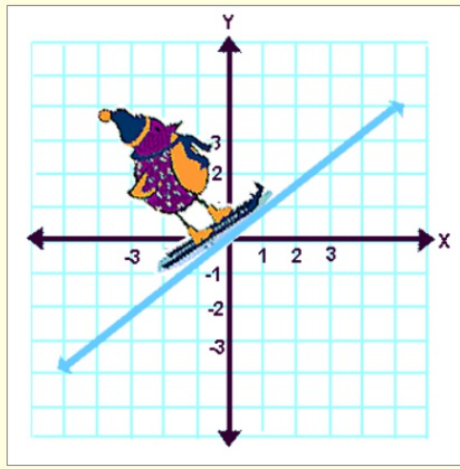
$\sqrt{13} = \sqrt{c^2}$

$\sqrt{13} = c$

Calculate the perimeter of quadrilateral EFGH.

Share with your face partner something you have learned so far today.

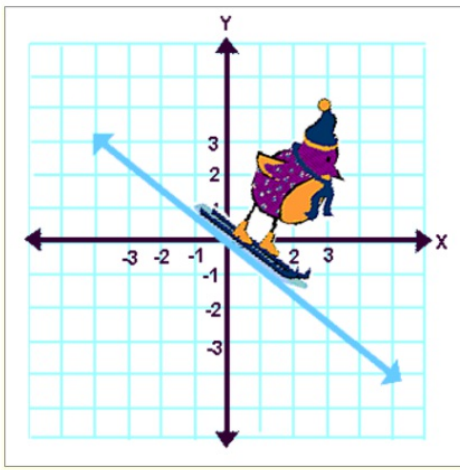
Come up with a definition for "slope" in mathematics.



Positive Slope

Lines that have positive slope, slant "up hill" (as viewed from left to right).

Ski Bird has to work hard to make it up the hill. He needs to exert more positive (+) energy to get up the hill.



Negative Slope

Lines that have negative slope, slant "down hill" (as viewed from left to right).

Ski Bird enjoys the ride down the hill. He needs to decrease (-) energy to try to slow down.

Slope: the measure of how slanted a line is

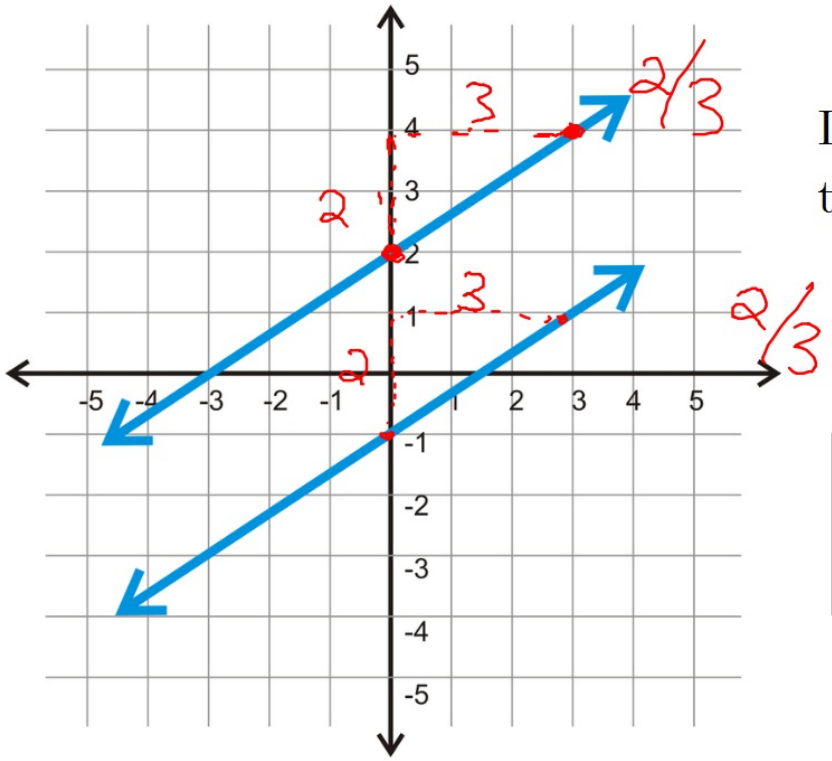
rise over run

vertical change over horizontal change

$$\frac{\Delta y}{\Delta x}$$

Slope Formula:

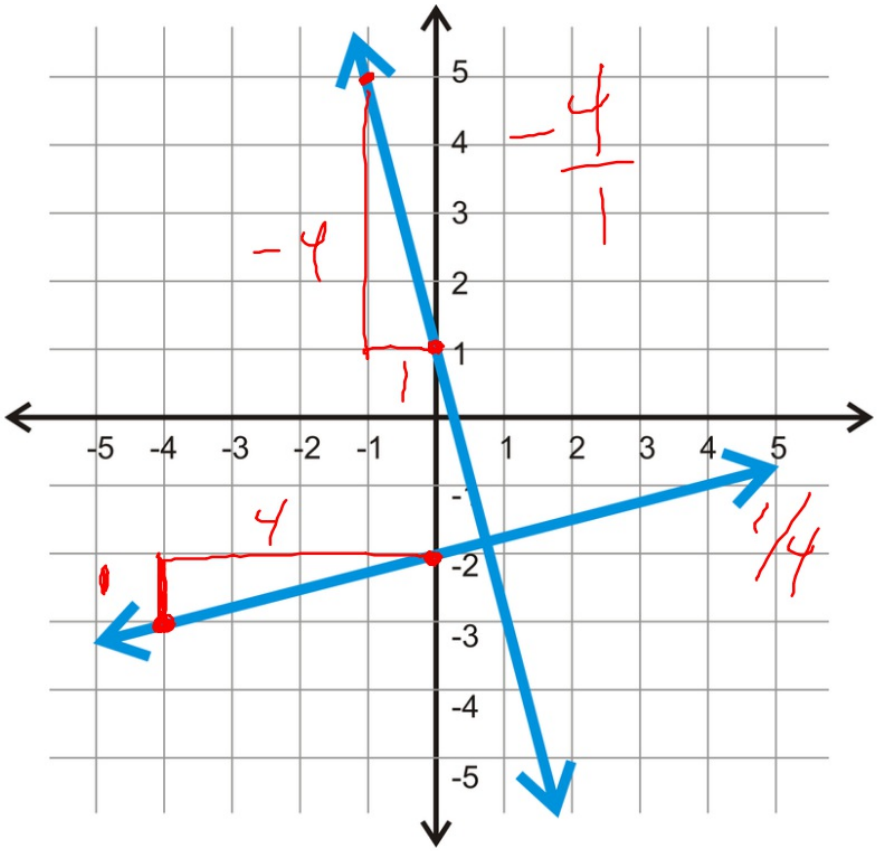
Privately think of some words that describe the blue figures.



Lines are parallel if and only if they have equal slopes.

[redacted]

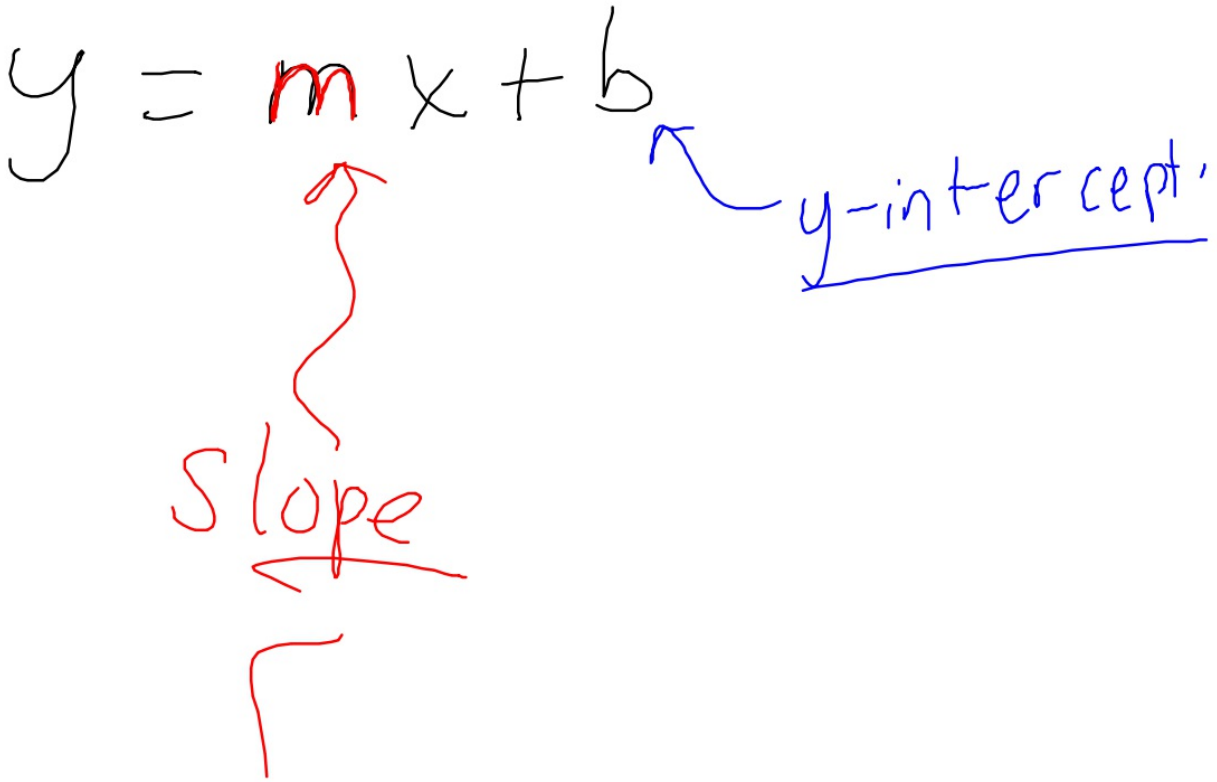
Privately think of some words to describe these blue figures.



Lines are perpendicular if and only if their slopes are opposite reciprocals of each other

[redacted]

Slope intercept form: Prior knowledge from Algebra I



Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$y = 3x+5$
$y = 3x-2$

A parallel
B perpendicular
C neither
D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$y = 3x+5$

$3y = 9x-12$

$\frac{3y}{3} = \frac{9x-12}{3}$

$y = 3x-4$

A parallel

B perpendicular

C neither

D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$y = 2x+5$ (slope 2, $-\frac{1}{2}$)

$y = 1/2\ x - 12$ (slope $\frac{1}{2}$, -2)

A parallel

B perpendicular

C neither

D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

y = 4x+5
y = -1/4 x - 12

A parallel
B perpendicular
C neither
D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$2x+5y = 10$

$5x - 2y = 8$

parallel

perpendicular

neither

Homework:

p. 59: #4-6 [GPE-B7a]

p. 97: #7-10 [GPE-B5a]