

Opener

*Due Today  
1D Work*



Unit 1 Quiz--Slope and y-Intercept

Example:

## Unit 1 Quiz, Slope and Y-intercept

Quizzes can be corrected for up to half points back. Fix on the BACK and turn in.

Name: \_\_\_\_\_ Period: \_\_\_\_ Score: \_\_\_\_ /12

Find the slope and y-intercept of the following equations

1.  $y = 12 - 3x$

Slope:  $-3/1$

Y-Intercept:  $(0, 12)$

\*X-Intercept:  $(4, 0)$

2.  $y - 10x = 5$

Slope:  $10/1$

Y-Intercept:  $(0, 5)$

\*X-Intercept:  $(-\frac{1}{2}, 0) + 1$

Find the slope and y-intercept of the following tables.

3.

X	Y
3	2
4	5
5	8

Slope:  $3/1$  or  $3$

Y-Intercept:  $(0, -7)$

\*X-Intercept:  $(\frac{7}{3}, 0)$

4.

X	Y
1	4
2	2
3	0

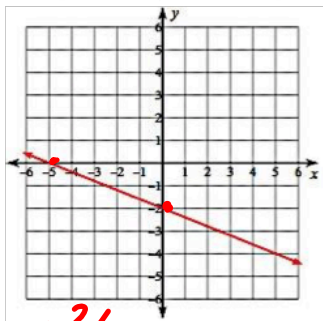
Slope:  $-2/1$  or  $-2$

Y-Intercept:  $(0, 6)$

\*X-Intercept:  $(3, 0)$

Find the slope and y-intercept of the following graphs

5.

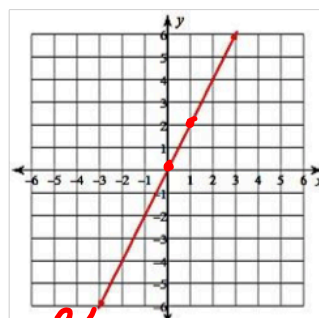


Slope:  $-2/5$

Y-Intercept:  $(0, -2)$

\*X-Intercept:  $(-5, 0)$

6.



Slope:  $3/1$

Y-Intercept:  $(0, 0)$

\*X-Intercept:  $(0, 0)$

## Unit 1 Quiz

Quizzes can be corrected for up to half points back. Fix on the BACK and turn in.

Name: \_\_\_\_\_

Find the slope and y-intercept of the following equations

1.  $y = 12 - 3x$

Slope: \_\_\_\_\_

Y-Intercept: \_\_\_\_\_

\*X-Intercept: \_\_\_\_\_

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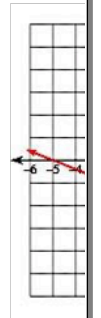
Slope: \_\_\_\_\_

Y-Intercept: \_\_\_\_\_

\*X-Intercept: \_\_\_\_\_

Find the slope and y-intercept of the following graphs

5.



Slope: \_\_\_\_\_

Y-Intercept: \_\_\_\_\_

\*X-Intercept: \_\_\_\_\_

# Questions on Homework: 1D Word



**1D "WORD"**

NO WORK, NO CREDIT. PENCIL ONLY.

Name \_\_\_\_\_ Per: \_\_\_\_\_

1. The amount of money Joe the plumber charges is represented by the equation  $C = 65h + 100$ .

- a. Define the two variables.  $h =$  \_\_\_\_\_  $C =$  \_\_\_\_\_
- b. What is the slope of the equation? \_\_\_\_\_ What does the slope represent in the context of the problem? \_\_\_\_\_
- c. What is the y-intercept? \_\_\_\_\_ What does it represent in the story? \_\_\_\_\_
- d. If you were to hire Joe and he worked for 11 hours, how much would you owe him? \_\_\_\_\_
- e. If Joe said that he made \$620 on a job, how many hours did he work? \_\_\_\_\_
- f. Complete the table.

$h$	$C$
0	
2	
3	
11	

2. Laura lights a candle. The **height** of the candle is **6"** and **each hour** that it **burns**  $\frac{1}{2}$ ".

- a. What is the slope of the equation representing the height of the candle? \_\_\_\_\_
- b. What does the slope represent in the context of the problem? \_\_\_\_\_
- c. What is the y-intercept? \_\_\_\_\_ What does it represent in the story? \_\_\_\_\_
- d. Define your dependent variable: \_\_\_\_\_
- e. Define your independent variable: \_\_\_\_\_
- f. What is the x-intercept? \_\_\_\_\_ What does it represent in the story? \_\_\_\_\_
- g. How many hours will the candle burn before it is gone? \_\_\_\_\_.
- h. If the height of the candle is **2.75"**, how long has the candle burned? \_\_\_\_\_
- i. Make a table that fits this situation.

Hours	height
	0
0	

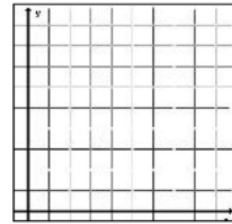
$y = -\frac{1}{2}x + 6$   
 $2.75 = -\frac{1}{2}x + 6$

3. Barbara joins an on-line movie club for \$15. She will pay \$3 for each movie that she downloads.

- a. What is the slope of the equation representing the amount of money Barbara will pay? \_\_\_\_\_
- b. What does the slope represent in the context of the problem? \_\_\_\_\_
- c. Define your dependent variable: \_\_\_\_\_
- d. Define your independent variable: \_\_\_\_\_
- e. Write an equation to represent the story \_\_\_\_\_
- f. If she downloaded a total of 12 movies, how much would it cost her? \_\_\_\_\_

4. Ricardo is draining his pool for the winter. There are **240 gallons** in the pool and it **drains out 60 gallons in 2 hours**.
- What is the slope of the equation representing Ricardo draining his pool? \_\_\_\_\_
  - What does the slope represent in the context of the problem? \_\_\_\_\_
  - Define your dependent variable: \_\_\_\_\_
  - Define your independent variable: \_\_\_\_\_
  - Write an equation to represent the story \_\_\_\_\_
  - How many hours will it take him to drain the pool? \_\_\_\_\_. On a graph, where do you see this? \_\_\_\_\_
  - How many hours has he been draining the pool if there are 150 gallons left? \_\_\_\_\_
  - Make a table that fits this situation i. Graph

(Don't forget to label the axis and scale)



5. Kristina is running the freshman class fundraiser. They are selling VHMS key chains for \$6 each as a fundraiser. The PTA donates \$35 up front.
- What is the slope? \_\_\_\_\_ What does it represent in the context of the problem? \_\_\_\_\_
  - What's the y-intercept? \_\_\_\_\_ What does it represent in the story? \_\_\_\_\_
  - Define your variables and write an equation to represent the story \_\_\_\_\_
  - If her goal is to raise \$500, how many key chains must she sell? \_\_\_\_\_
  - If she sells 58 key chains, how much money will she earn? \_\_\_\_\_
  - List at least 3 data points that would fit the situation. h. Describe how to choose the scale for your axes for your graph. i. Graph (label and scale)

$(0, 35)$   
 $(7.5, 500)$   
 $(, )$



Solve the following for "y" and list the slope and y-intercept:

6.  $9y = 3x + 1$   
 $y = \frac{1}{3}x + \frac{1}{9}$

Solve: \_\_\_\_\_  
 Slope: \_\_\_\_\_  
 y-intercept: \_\_\_\_\_  
 x-intercept: \_\_\_\_\_

7.  $20x + 5y - 7 = -2$  8.  $2x + 3y + 2x = 8$

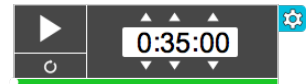
$-20x + 5y - 7 = -2$   
 $5y - 7 = -20x - 2$   
 $5y = -20x + 5$   
 $y = -4x + 1$

Solve: \_\_\_\_\_  
 Slope: \_\_\_\_\_  
 y-intercept: \_\_\_\_\_  
 x-intercept: \_\_\_\_\_

# Grade Homework, 1D Word



# 9/7 Lesson 1E Train Tracks

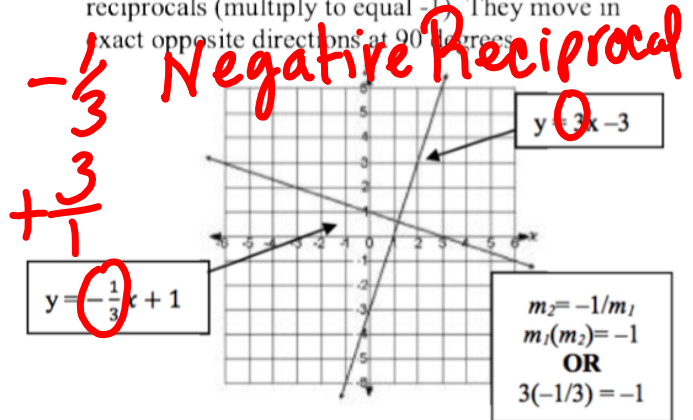
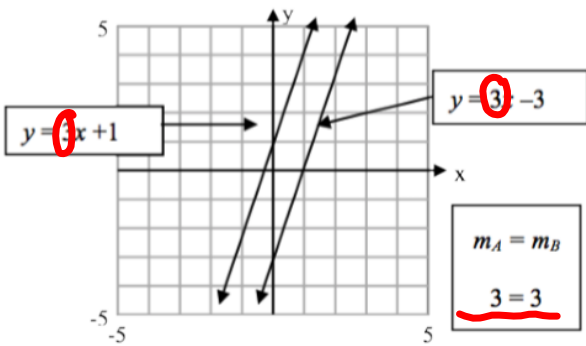


## The Slope of Parallel and Perpendicular Lines

SG: Pg 11

Parallel Lines have slopes that are equal. (They always go in the same direction.)

Perpendicular Lines have slopes that are negative reciprocals (multiply to equal -1). They move in exact opposite directions at 90 degrees.



Find the **negative reciprocal**

 $\frac{1}{2}$  $-\frac{2}{1}$  $-5$  $\frac{1}{5}$  $\frac{3}{2}$  $-\frac{2}{3}$  $-\frac{1}{100}$



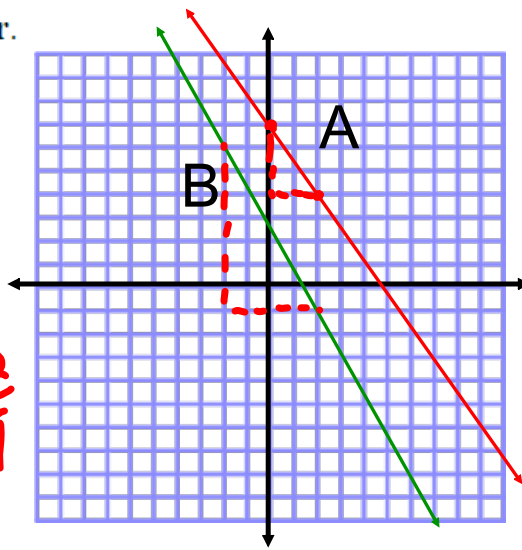
Given the graphs below, find the slope of each line and then circle whether the lines are parallel, perpendicular, or neither.

A Slope  $-\frac{3}{2}$

B Slope  $-\frac{1}{4}$

$4\frac{1}{2}$   
 $\frac{9}{2}$

$-\frac{2}{9}$



$+\frac{3}{1}$     $-\frac{1}{3}$   
 $-4$     $+\frac{1}{4}$

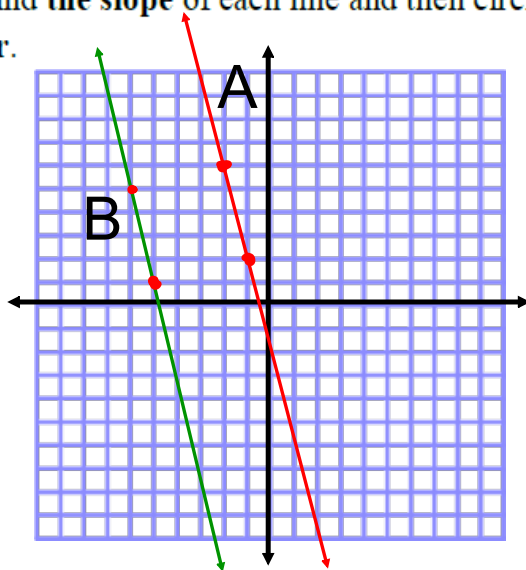
Neither

Given the graphs below, find the slope of each line and then circle whether the lines are parallel, perpendicular, or neither.

A Slope  $-\frac{4}{1}$

B Slope  $-\frac{4}{1}$

Parallel



Tell whether the following lines are parallel, perpendicular, or neither given the equations below. SYW.

$$y = -2x + 9 \text{ and } y = 2x + 4$$

$-2$       $\frac{1}{2}$      Perpendicular

$$3x - 3y = 3 - 3x \text{ and } y = -x - 1$$

$$\frac{-3y}{-3} = \frac{3}{-3} - \frac{6x}{-3} \quad m = -1$$

$$y = -1 + 2x$$

$m = 2$

Neither the same nor  
are the negative reciprocals  
 $\therefore$  they are not parallel & they  
are not perpendicular to ea.  
other.

Tell whether the following lines are **parallel**, **perpendicular**, or **neither** given the equations below. SYW.

Line A (2, 5) & (-2, 7); Line B (0, 4) & (1, 6)

$$\begin{array}{c|c} x & y \\ \hline 2 & 5 \\ -2 & 7 \end{array}$$

$$m = -\frac{1}{2}$$

$$\begin{array}{c|c} x & y \\ \hline 0 & 4 \\ 1 & 6 \end{array}$$

$$m = \frac{2}{1}$$

Negative Reciprocals  
= perpendicular

a. Write any equation that would be parallel to the line  $y = -\frac{1}{2}x + 6$ .  $y = \frac{1}{2}x + 7$

b. Write an equation from a that passes through the point  $(10, 4)$ .  $y = -\frac{1}{2}x + 9$

$$m = -\frac{1}{2} \quad \text{point } (10, 4)$$

$$4 = -\frac{1}{2}(10) + b$$

$$4 = -5 + b$$

$$9 = b$$

Solve for x:

$$-2(-x-1)=3x$$

$$2x+1=3x$$

$$\boxed{1=x}$$



## Attachments

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1D Word.pdf

1D Word KEY.notebook