

B

$$y = 3x + 5$$

H

$$y = -\frac{1}{3}x - 1$$

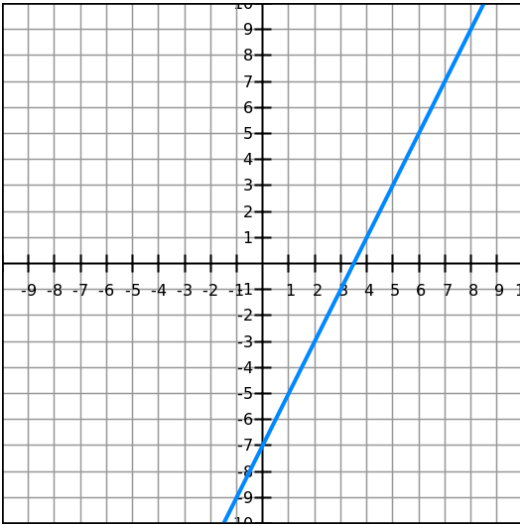
D

$$y = 2x$$

C

$$y = \frac{1}{2}x - 3$$

F



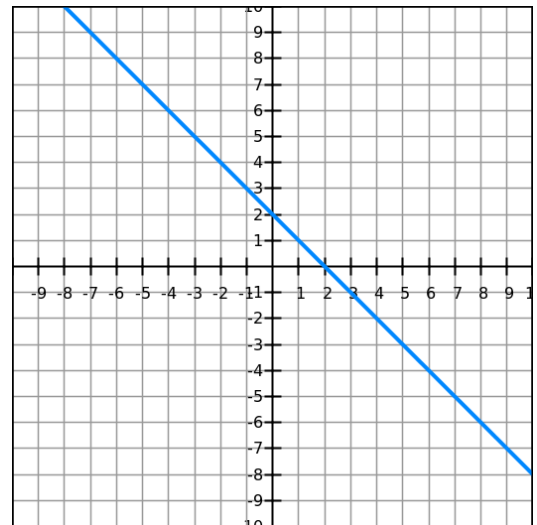
A

x	y
-2	9
-1	7
0	5
1	3
2	1

G

x	y
-2	0
-1	-1
0	-2
1	-3
2	-4

O



I

$$y = \frac{3}{4}x - 1$$

K

$$y = \frac{3}{4}x + 9$$

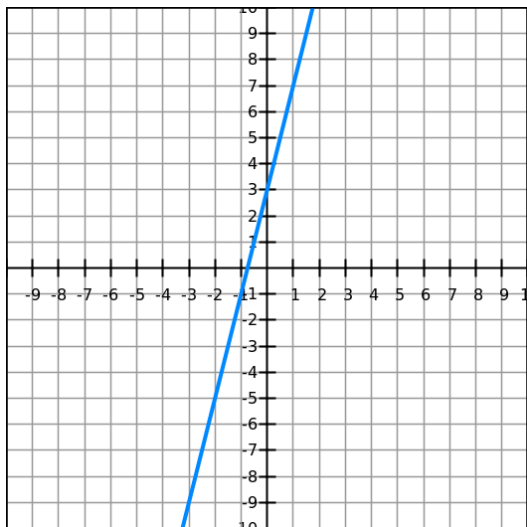
M

x	y
-2	4
-1	7
0	10
1	13
2	16

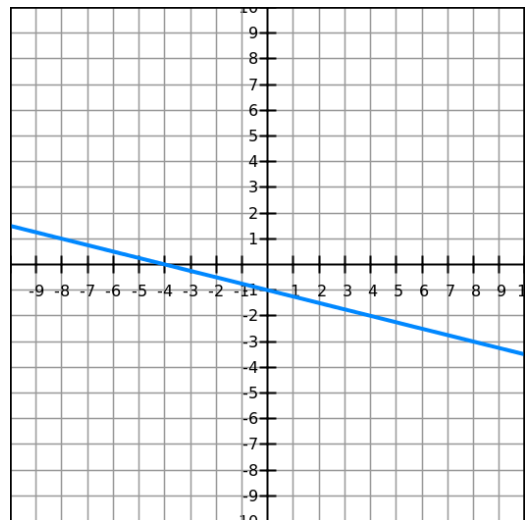
L

x	y
-2	2
-1	5
0	8
1	11
2	14

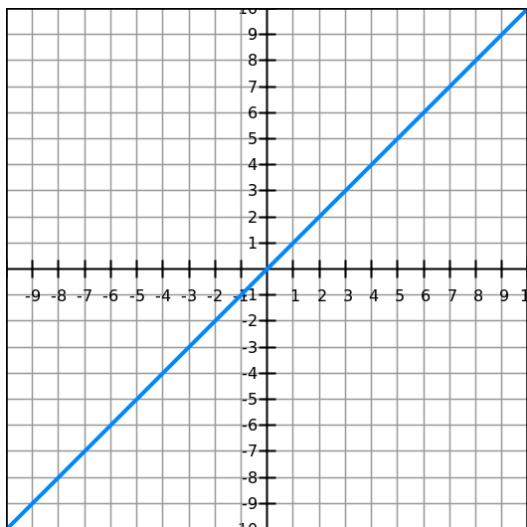
J



H



N



E

x	y
-2	2
-1	1
0	0
1	-1
2	-2

Name: _____

Date: _____ Per: _____

Parallel and Perpendicular Matching Activity

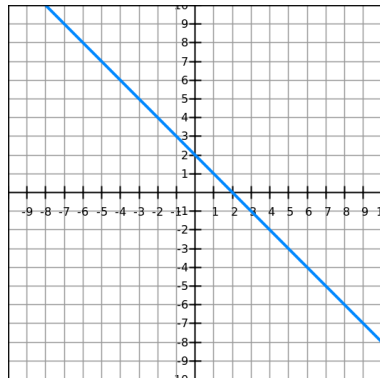
Directions: Match each equation, graph, and table to its corresponding **parallel** or **perpendicular** line. Record the letters of your pairs in the table below.

These lines are PARALLEL \parallel	These lines are PERPENDICULAR \perp
1. _____ \parallel _____ slope= _____	5. _____ \perp _____
2. _____ \parallel _____ slope= _____	6. _____ \perp _____
3. _____ \parallel _____ slope= _____	7. _____ \perp _____
4. _____ \parallel _____ slope= _____	8. _____ \perp _____

Directions: Cards O and G are a match. Determine if they are **parallel** or **perpendicular**. Show your work.

9.

O

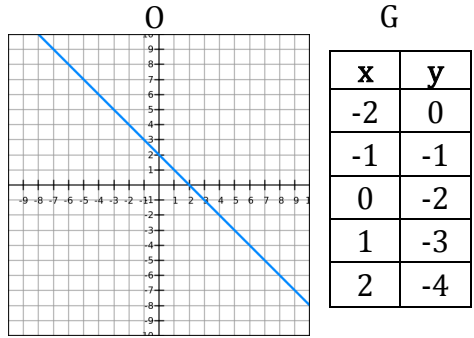


G

x	y
-2	0
-1	-1
0	-2
1	-3
2	-4

Parallel or Perpendicular? _____

10. Barack and Michelle Obama were given question #9 and were told to determine if the lines on cards O and G are **parallel** or **perpendicular**. Their work is shown below:



Barack

O.

$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{-1}{1} = -1$$

Slope = -1

G.

x	y
-2	0
-1	-1

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 0}{-1 - (-2)} = \frac{-1}{-3} = \frac{1}{3}$$

Slope = $\frac{1}{3}$

So these lines O and G are parallel.

Michelle

O.

$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{-1}{1} = -1$$

Slope = -1

G.

x	y
-2	0
-1	-1

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0 - (-1)}{-2 - (-1)} = \frac{1}{-1} = -1$$

Slope = 1

So these lines O and G are perpendicular

(a) Do you agree with Barack or Michelle or neither? _____

(b) Why? Use what you know about **slope**, **parallel**, and **perpendicular** to support your answer.

POSSIBLE SOLUTIONS

These lines are PARALLEL \parallel	These lines are PERPENDICULAR \perp
1. <u> D </u> \parallel <u> F </u> slope= <u> 2 </u>	5. <u> B </u> \perp <u> H </u>
2. <u> O </u> \parallel <u> G </u> slope= <u> -1 </u>	6. <u> A </u> \perp <u> C </u>
3. <u> M </u> \parallel <u> L </u> slope= <u> 3 </u>	7. <u> J </u> \perp <u> H </u>
4. <u> I </u> \parallel <u> K </u> slope= <u>$-\frac{3}{4}$</u>	8. <u> N </u> \perp <u> E </u>