Notes 2-3

Int 2 **Horizontal/Vertical Lines & T-Charts** **Unit 2**

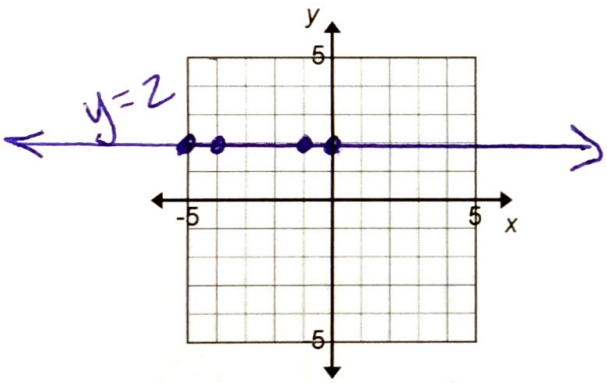
1. **You want to graph the line $y = 2$. This means that the y-coordinate is 2 in every point on the line. Write 3 points that have 2 for the y-coordinate, and fill in the table.**

(-1, 2) (0, 2) (-4, 2)

x	y
-1	2
0	2
-4	2
-5	2

2.5 2

Now ~~plot the~~ points.



The slope of the line is 0 .

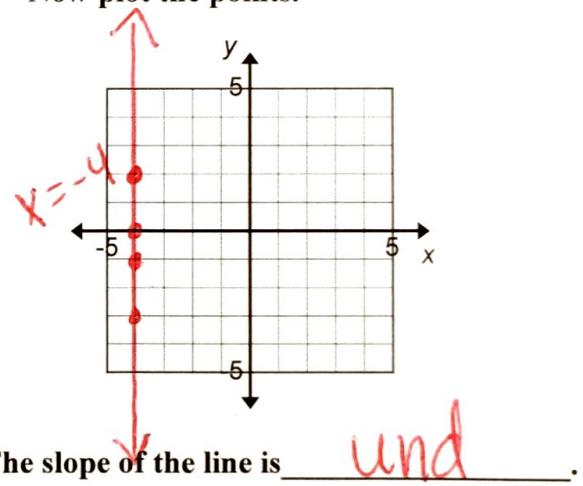
The line is horizontal / vertical. (circle one)

2. **You want to graph the line $x = -4$. This means that the x-coordinate is −4 in every point on the line. Write 3 points that have −4 for the x-coordinate.**

(-4, 2) (-4, -1) (-4, -3)

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

Now plot the points.



The slope of the line is und .

The line is horizontal / vertical. (circle one)

Write 3 points that will be on the line, and then graph the line from the points.

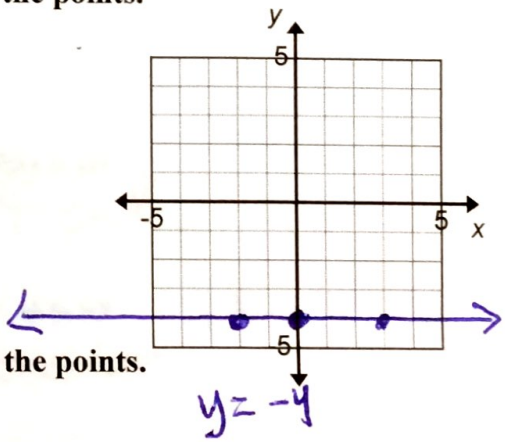
3. **$y = -4$**

(0, -4) (3, -4) (-2, -4)

The slope of the line is 0 .

The line is horizontal / vertical. (circle one)

Write 3 points that will be on the line, and then graph the line from the points.



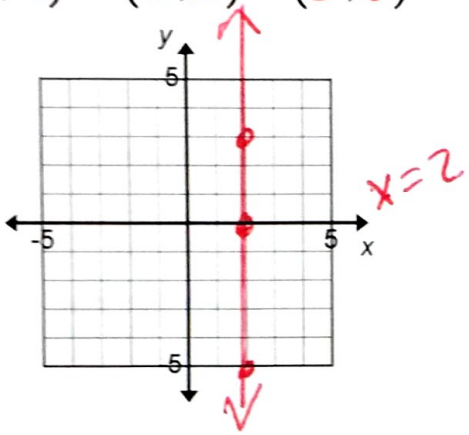
Notes 2-3

Int 2 | **Horizontal/Vertical Lines & T-Charts** | **Unit 2**

Write 3 points that will be on the line, and then graph the line from the points.

4. $x = 2$

(2,-5) (2,3) (2,0)

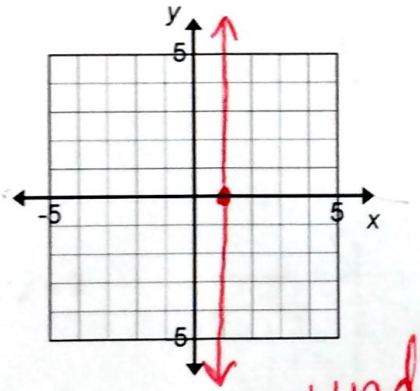


The slope of the line is und.

The line is horizontal / vertical. (circle one)

5. $x = 1$

(,) (,) (,)

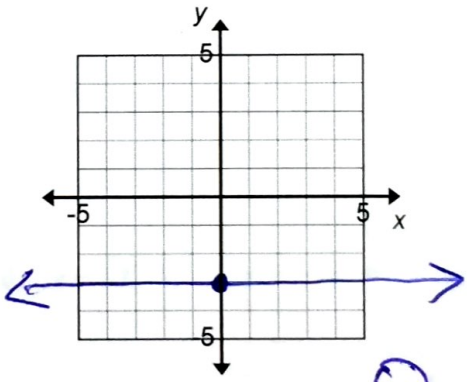


The slope of the line is und.

The line is horizontal / vertical. (circle one)

6. $y = -3$

(,) (,) (,)



The slope of the line is 0.

The line is horizontal / vertical. (circle one)

Make a conjecture!

Look at all of the $x =$ equations. Do you notice a pattern? If so, what is it?

x = # is always vertical

slope = und $\frac{\#}{0}$

Look at all of the $y =$ equations. Do you notice a pattern? If so, what is it?

y = # is always horizontal

Slope = 0 $\frac{0}{\#}$

Notes 2-3

Int 2 **Horizontal/Vertical Lines & T-Charts** **Unit 2**

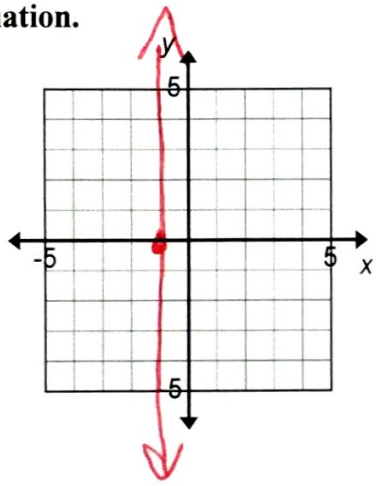
HORIZONTAL LINES: $y = \#$ hits the y-axis

VERTICAL LINES: $x = \#$ hits the x-axis

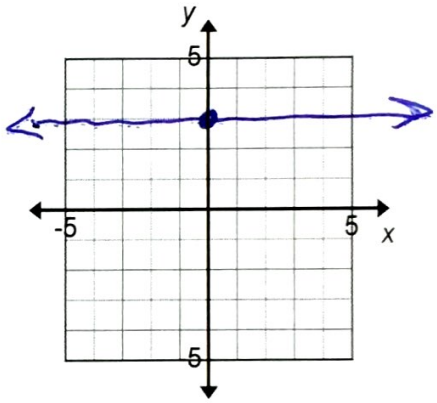
Now that you know the pattern, you can use it as a shortcut.

Graph each equation.

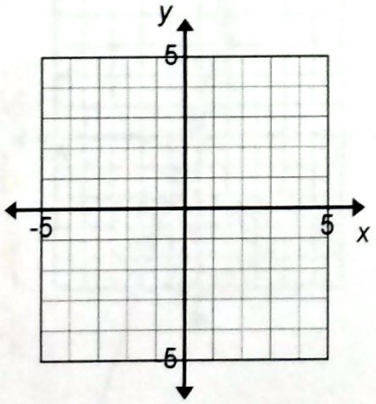
7. $x = -1$



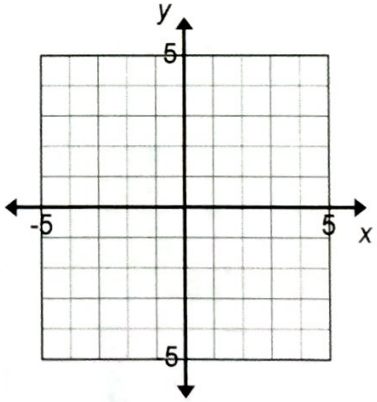
8. $y = 3$



9. $y = 2$



10. $x = -3$



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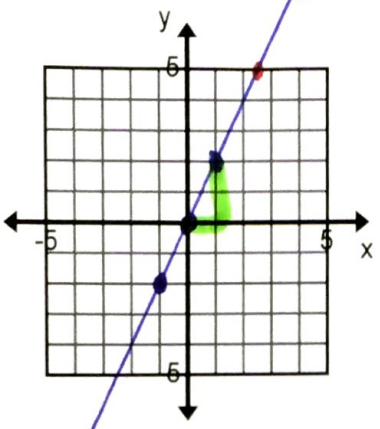
Int 2 | **Horizontal/Vertical Lines & T-Charts** | **Unit 2**

Create the following tables and graph each equation. Identify the slope for each equation.

11. $y = 2x$

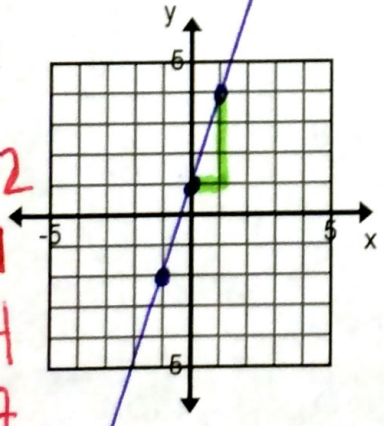
x	y
-1	2(-1) -2
0	2(0) 0
1	2(1) 2
4	2(4) 8
2.5	2(2.5) 5



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

12. $y = 3x + 1$

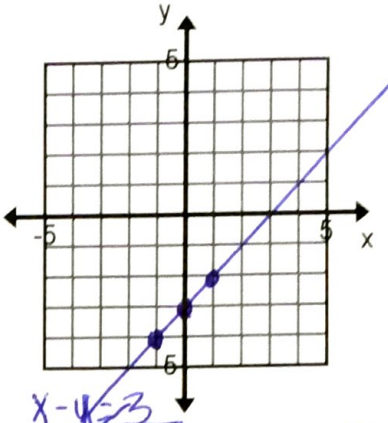
x	y	
-1	3(-1)+1 -3+1	-2
0	3(0)+1 0+1	1
1	3(1)+1 3+1	4
2	3(2)+1 6+1	7



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

13. $x - y = 3$

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



$x - y = 3$

$-1 - y = 3$
$+1 \quad +1$
$\frac{-1y = 4}{-1 \quad -1}$
$y = -4$

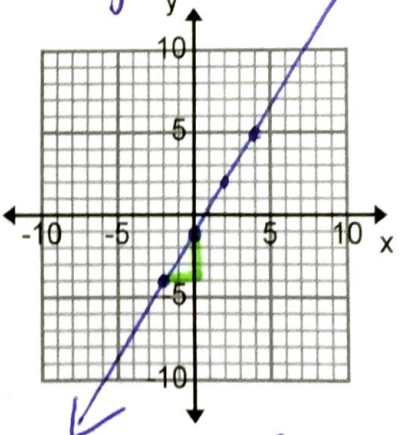
$0 - y = 3$
$\frac{-1y = 3}{-1 \quad -1}$
$y = -3$

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

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

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

x	y
-2	-4
0	-1
2	2
4	5



$\frac{3}{2}(-2) - 1$
$-3 - 1$

$\frac{3}{2}(2) - 1$
$3 - 1$

$\frac{3}{2}(0) - 1$
$0 - 1$

$\frac{3}{2}(4) - 1$
$6 - 1$

Slope = $\frac{3}{2}$