5 Horizontal and Vertical Lines

February 12, 2019 9:23 PM

Math 9

Day 5 – Horizontal and Vertical Lines

Date: _____

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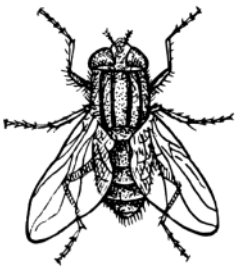
Cartesian Coordinate System

input

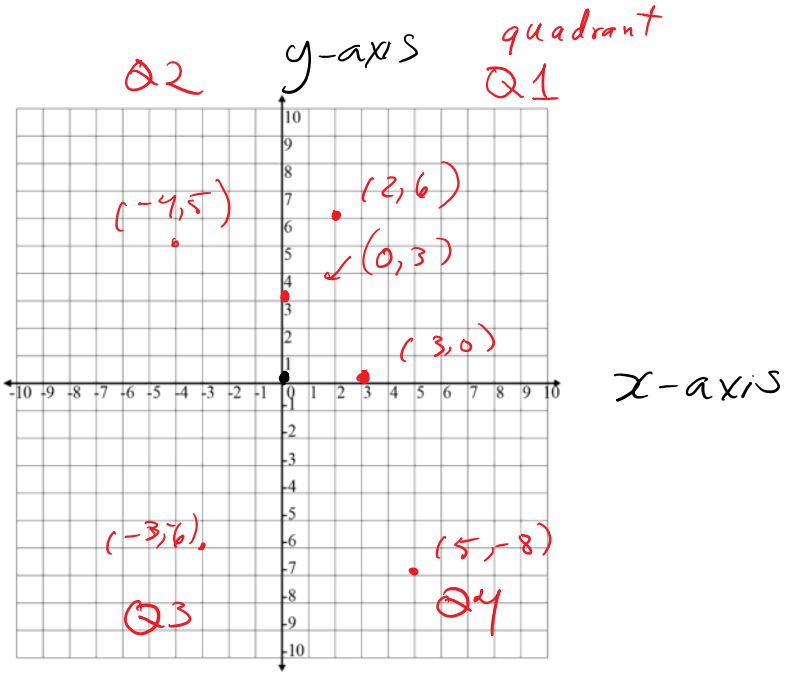
(x , y)

René Descartes
1596



Plot:

- (0,0)
- (0,3)
- (3,0)
- (2, 6)
- (-4, 5)
- (-3, -6)
- (5, -8)



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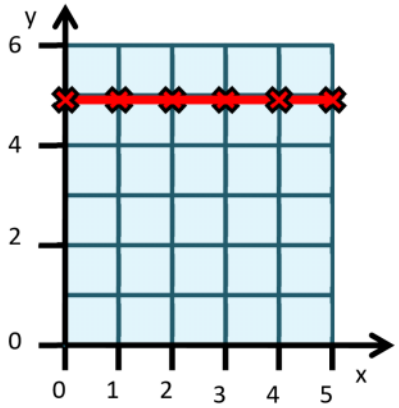
Learning Outcomes Covered:

4C: I can understand the concepts behind horizontal and vertical lines.

Today, we will look at linear equations that only involve ONE variable.

Horizontal Straight Lines

Here is a horizontal straight line drawn on axes.



1. Write down the coordinates for each point on the line.

   (0,5), (1,5), (2,5), (3,5), (4,5)

2. Write down anything thing you notice about this line.

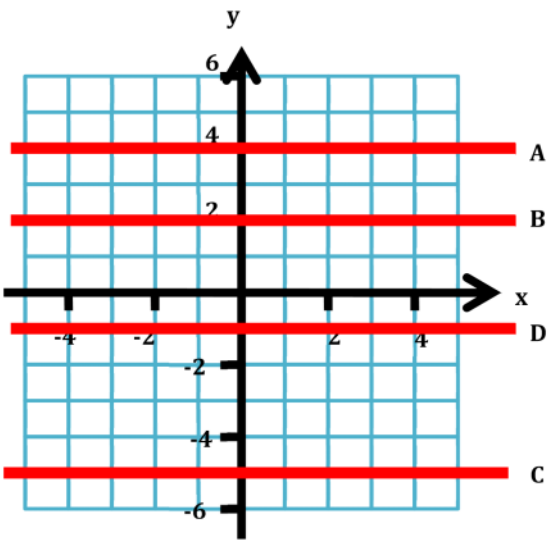
   all have y = 5

3. Therefore, the line is called:

   y = 5

   HOY → y = ?
   ↳ horizontal line

4. Now that you have named the line, which we call a **relation** in Math, name the following lines.



A - y = 4

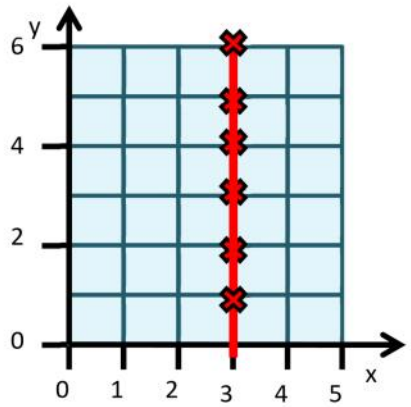
B - y = 2

C - y = -5

D - y = -1

Vertical Straight Lines

Here is a vertical straight line drawn on axes.



1. Write down the coordinates for each point on the line.

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

2. Write down anything thing you notice about this line.

   all $x = 3$

3. Therefore, this line is called:

   $x = 3$

y u x → $x = ?$
vertical line

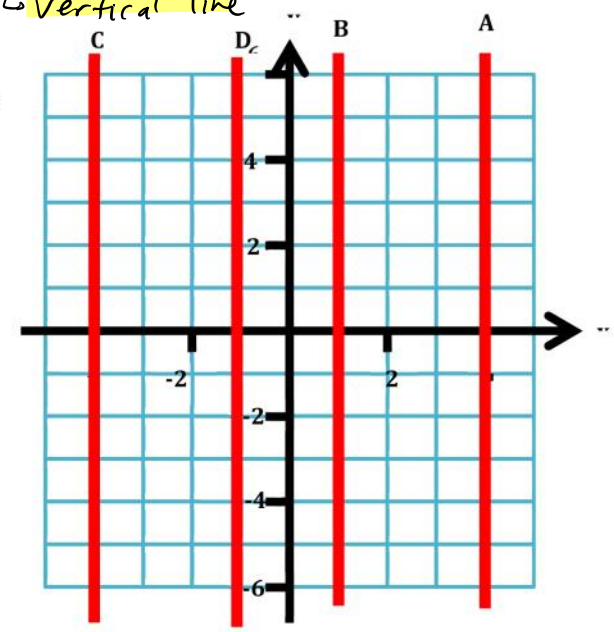
4. Now that you have named the line, which we call a **relation** in Math, name the following lines.

   A - $x = 4$

   B - $x = 1$

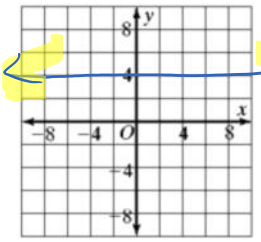
   C - $x = -4$

   D - $x = -1$



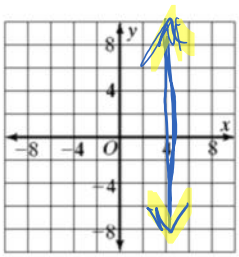
HORIZONTAL AND VERTICAL LINES

H	O	Y
horizontal		$y = ?$



$y = 4$

V	vertical
U	
X	$x = ?$



$x = 4$

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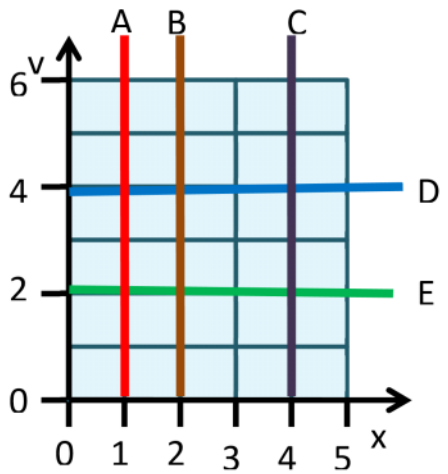
Exercise **Two**

Name the functions for each of these lines.

HOY VUX



A $x = 1$

B $x = 2$

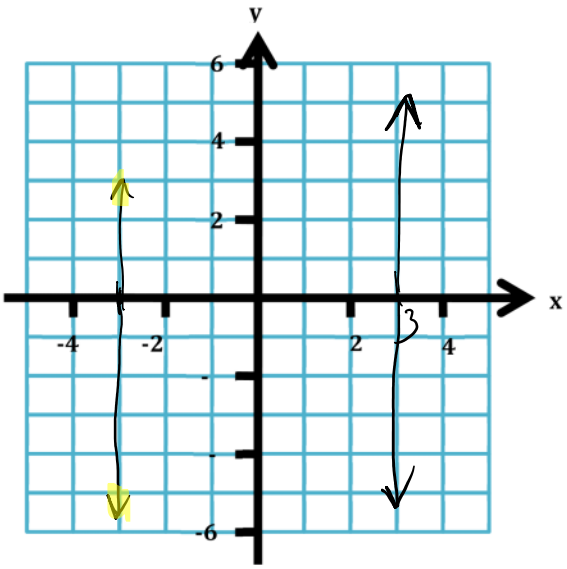
C $x = 4$

D $y = 4$

E $y = 2$

Exercise Three

Draw the functions below onto the graph at right. (Make sure you label them)



1. $y = 4$
2. $x - 3 = 0$

   $+3 \quad +3$

   $x = 3$
3. $y = -5$
4. $y - 1 = 0$
5. $2x + 6 = 0$

   $-6 \quad -6$

   $\frac{2x}{2} = \frac{-6}{2}$

   $x = -3$
6. $x + 5 = 0$

Assignment: 1) Graphing vertical and horizontal lines worksheet,

2) Make your own HOY VUX poster that explains how HOY VUX works.