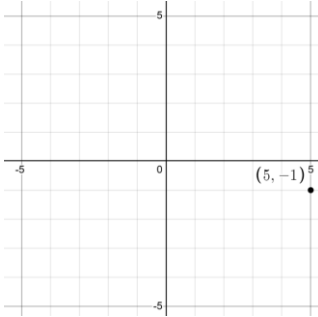


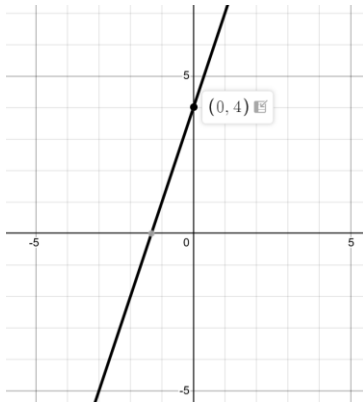
Math 9 Linear Relations Extra Practice

1. Plot the point $(5, -1)$



2. $y = 3x + 4$

- a. Sketch this line



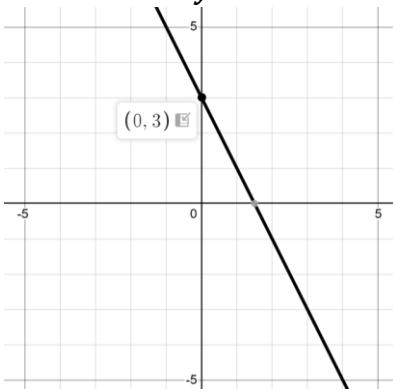
- b. Slope?

3

- c. y-intercept?

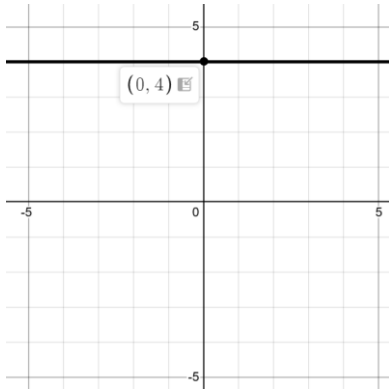
4

3. Sketch the line $y = -2x + 3$



4. $y = 4$

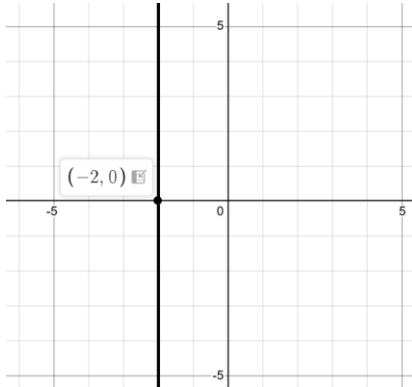
a. Sketch this line



b. What quadrants is this line in?
I, II

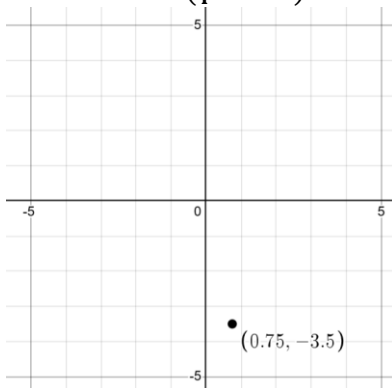
5. $x = -2$

a. Sketch the line

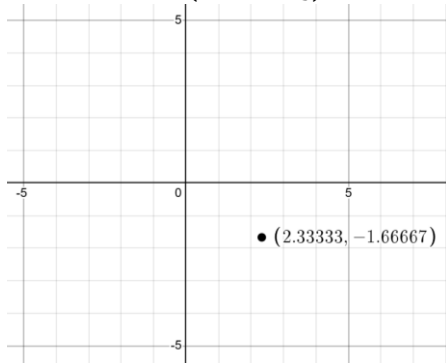


b. What quadrants is this line in?
II, III

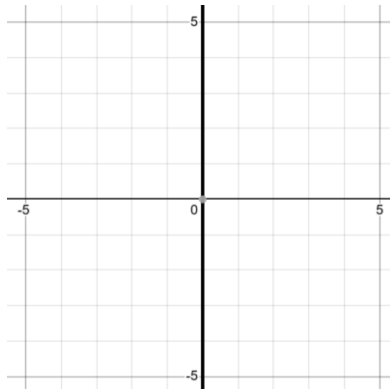
6. Plot the point $(\frac{3}{4}, -3.5)$



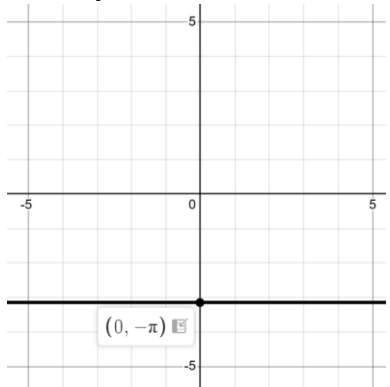
7. Plot the point $(2.\bar{3}, -1\frac{2}{3})$



8. Sketch $x = 0$



9. Sketch $y = -\pi$

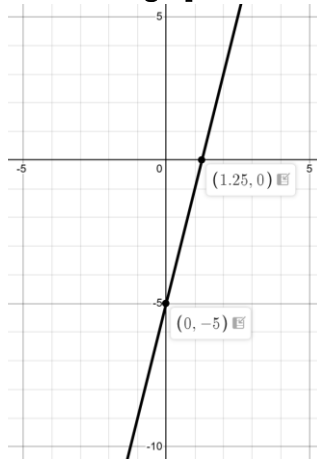


10. $y = 4x - 5$

a. Create a table of values

x	$4x - 5$
-2	-13
-1	-9
0	-5
1	-1
2	3
3	7
4	11

b. Sketch the graph



c. State the x-intercept

$$0 = 4x - 5$$

$$5 = 4x$$

$$x = \frac{5}{4}$$

d. When $x = -2$, what is the value of y ?

$$-13$$

11. Given $y = kx + c$ what is the meaning of:

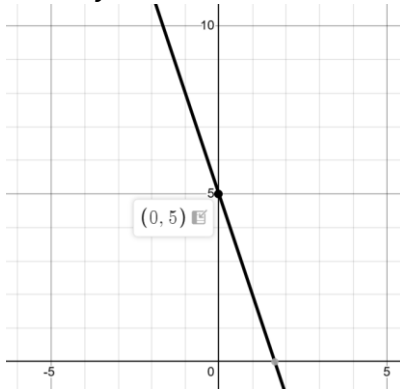
a. k ?

Slope

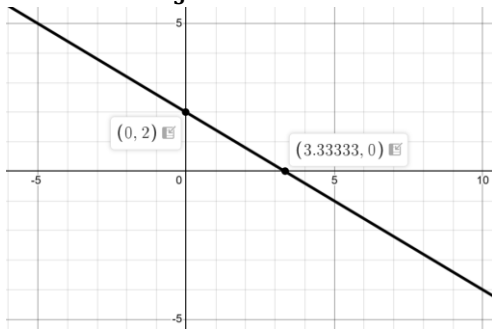
b. c ?

y -intercept or c -intercept

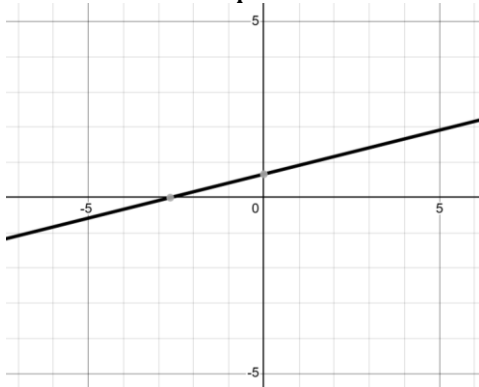
12. Sketch $y = 5 - 3x$



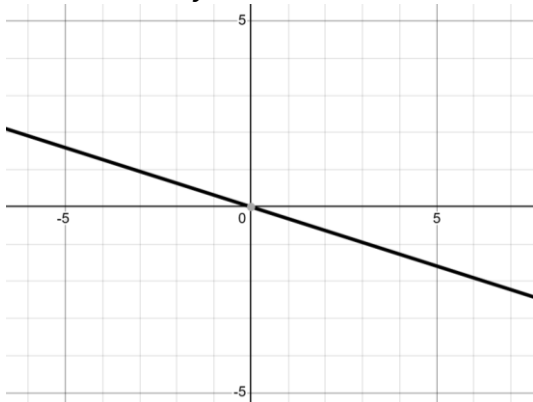
13. Sketch: $y = \frac{-3}{5}x + 2$



14. Sketch $y = 0.\bar{6} + \frac{x}{4}$



15. Sketch $x = -\pi y$



16. Given the points $(-1, 2)$ and $(-3, 5)$

a. Find the slope

$$m = \frac{5-2}{-3+1} = \frac{3}{-2}$$

b. Find the line equation in slope-point form: $y - y_1 = m(x - x_1)$

$$y - 2 = -\frac{3}{2}(x + 1) \text{ or } y - 5 = -\frac{3}{2}(x + 3)$$

c. Find the line equation in slope-intercept form: $y = mx + b$

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

$$y = -\frac{3}{2}x - \frac{3}{2} + \frac{4}{2} = -\frac{3}{2}x + \frac{1}{2}$$

17. Given the point $(2\frac{1}{2}, -3)$ and $(-5, 1\frac{1}{3})$ find the slope.

$$(\frac{5}{2}, -3) \text{ and } (-5, \frac{4}{3})$$

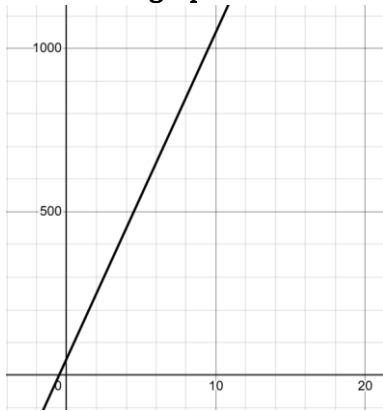
$$m = \frac{\frac{4}{3}+3}{-5-\frac{5}{2}} = -\frac{26}{45}$$

18. You charge \$50 for a diagnostic fee and then charge \$100 per hour of labour

a. What is the equation of the graph?

$$y = 100x + 50$$

b. Sketch this graph



c. How much do you make for working 4 hours?

\$450

d. How long do you have to work to earn \$750?

7 hours

19. 30, 34, 38, ... Find the 100th number

$$y = 4x + 26$$

$$y = 4(100) + 26 = 426$$