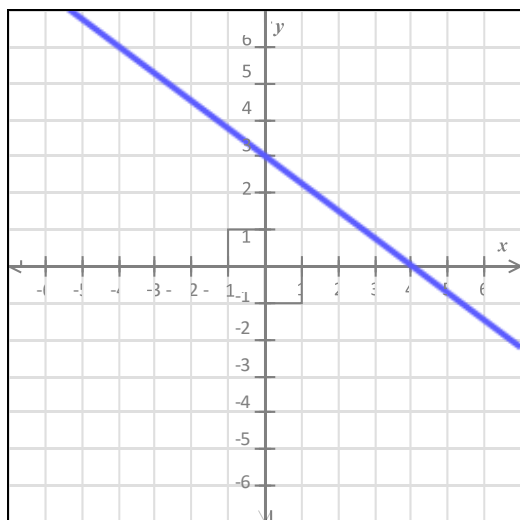


1. For each ordered pair, determine whether it is a solution to $y = 6x - 4$.

(x, y)	Is it a solution?	
	Yes	No
$(-6, 27)$	☐	☒
$(-4, -9)$	☐	☒
$(3, -14)$	☐	☒
$(8, 44)$	☒	☐

5. Find the x -intercept and the y -intercept of the line below.



x - intercept = $(2,0)$

y - intercept = $(0,3)$

6. Find the x -intercept and y -intercept of the line.

$$6x + 5y = -12$$

x -intercept: $(-2,0)$

y -intercept: $(0,-2.4)$

7. The equation of a line is given below.

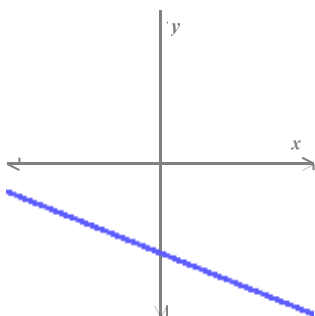
$$6x - 9y = 27$$

Find the x -intercept and the y -intercept. Then use them to graph the line.

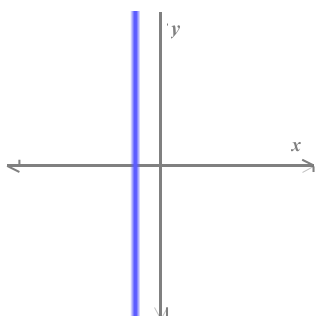
x -intercept: (4.5,0)

y -intercept: (0,-3)

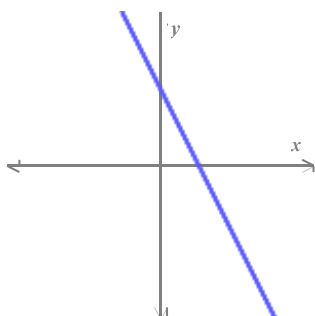
8. For each line, determine whether the slope is positive, negative, zero, or undefined.



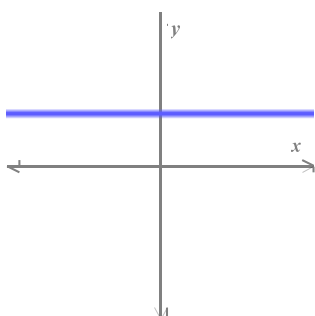
- ☐ Positive
- ☒ Negative
- ☐ Zero
- ☐ Undefined



- ☐ Positive
- ☐ Negative
- ☐ Zero
- ☒ Undefined



- ☐ Positive
- ☒ Negative
- ☐ Zero
- ☐ Undefined



- ☐ Positive
- ☐ Negative
- ☒ Zero
- ☐ Undefined

9. Fill in the blanks below.

Find the slope of the line passing through the points (-8,5) and (8,5)
Slope: 0
Find the slope of the line passing through the points (9,-2) and (-2,-2)
Slope: 0

10. Graph the line with slope $\frac{1}{2}$ passing through the point (4 , 2) .

$$\frac{1}{2} = (y - 2)/(x-4)$$

$$2(y-2) = x - 4$$

$$2y - 4 = x - 4$$

$$2y = x$$

$$y = x/2$$

11. Find the y-intercept and the slope of the line.

$$y = -\frac{1}{5}x - \frac{1}{2}$$

x- intercept = (-2.5,0)

y- intercept = (0,-0.5)

12. Find the y-intercept and the slope of the line.

$$-2x + 5y = -4$$

$$5y = 2x - 4$$

$$y = 2x/5 - 4/5$$

$$\text{Slope} = 2/5 \text{ or } 0.4$$

$$\text{y-intercept} = (0, 4/5) \text{ or } (0, 0.8)$$

Write your answers in simplest form

13. A line passes through the point (-3, -6) and has a slope of 5.

Write an equation in slope-intercept form for this line.

$$5/1 = (y +6)/(x+4)$$

$$(y+6) = 5(x +4)$$

$$y + 6 = 5x + 20$$

$$y = 5x + 20 - 6$$

$$y = 5x + 14$$

14. Write an equation in slope-intercept form for the line with slope $-1/2$ and y -intercept 7.

$$y = -x/2 + 7$$

15. The equations of three lines are given below.

Line 1: $y = x/3 - 7$

Line 2: $3x + 9y = -9$

Line 3: $y = -3x + 6$

For each pair of lines, determine whether they are parallel, perpendicular, or neither.

Line 1 and Line 2:	☐ Parallel	☐ Perpendicular	☒ Neither
Line 1 and Line 3:	☐ Parallel	☒ Perpendicular	☐ Neither
Line 2 and Line 3:	☐ Parallel	☐ Perpendicular	☒ Neither

16. Consider the line $y = x/3$

What is the slope of a line perpendicular to this line? Slope = -3

What is the slope of a line parallel to this line? Slope = $1/3$

17. Consider the line $8x + 4y = 3$.

$$8x + 4y = 3$$

$$4y = -8x + 3$$

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

What is the slope of a line parallel to this line? Slope = -2

What is the slope of a line perpendicular to this line? Slope = $\frac{1}{2}$

18. A line passes through the point (-4, 2) and has a slope of 3.

Write an equation in point-slope form for this line.

$$3/1 = (y - 2)/(x + 4)$$

$$(y - 2) = 3(x + 4)$$

$$y - 2 = 3x + 12$$

$$y = 3x + 12 + 2$$

$$y = 3x + 14$$

19. A line passes through the point (10,2) and has a slope of $\frac{1}{2}$.

Write an equation in slope-intercept form for this line.

$$\frac{1}{2} = (y - 2)/(x - 10)$$

$$2(y - 2) = (x - 10)$$

$$2y - 4 = x - 10$$

$$2y = x - 10 + 4$$

$$y = x/2 - 6$$

20. Find an equation for the line below.

(-1,1) (6,3)

$$\text{Slope} = (3 - 1)/(6 - (-1)) = 2/7$$

$$2/7 = (y - 1)/(x + 1)$$

$$7(y - 1) = 2(x + 1)$$

$$7y - 7 = 2x + 2$$

$$7y = 2x + 2 + 7$$

$$7y = 2x + 9$$

$$y = 2x/7 + 9/7$$