



THIRD SPACE
LEARNING

$y = mx + b$ Worksheet

Algebra

Grades 6 to 8

Skill Questions

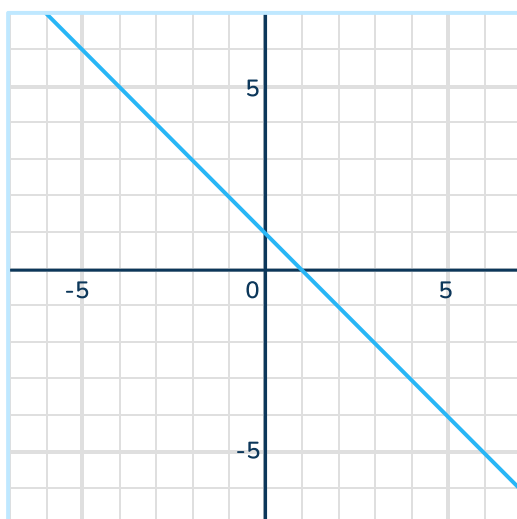
Name:

Date:

- 1 Determine the slope and y -intercept of the linear equation,
 $y = 5x$

Answer

- 2 Determine the equation of the line from the graph.



Answer

- 3 From the table, write an equation in the form of $y = mx + b$

x	y
0	-1
1	1
2	3
3	5

Answer

$y = mx + b$ Worksheet | Grades 6 to 8

- 4 Identify the slope and the y -intercept of the equation.

$$y = 9 - x$$

Answer

- 5 Two points on a line are given, (6, 2) and (0, 5). Write a linear equation in the form $y = mx + b$ that represents the line.

Answer

- 6 Determine the slope and y -intercept of the linear equation.

$$2y - 3x = 8$$

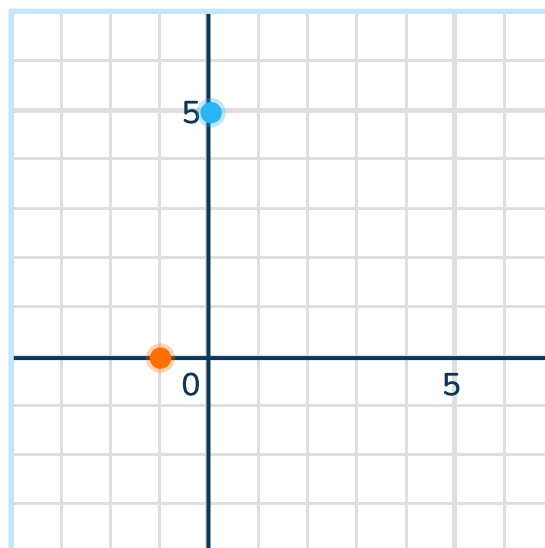
Answer

- 7 Graph the line, $y = 2x$

- 8 Graph the line, $y = -x - 2$

Answer

- 9 Write the equation of a line that contains the two point graphed on the coordinate plane.



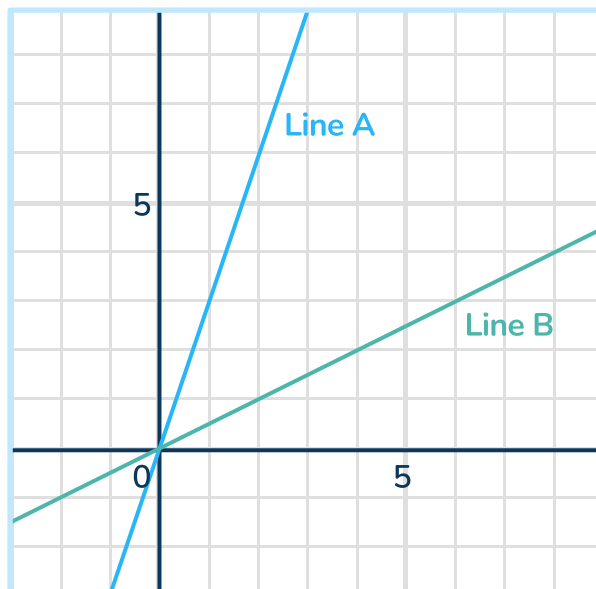
Answer

- 10 Determine the slope and y -intercept of the linear equation.
 $2x - y + 9 = 0$

Answer

Applied Questions

- 11 Which line has a greater rate of change? Explain



Answer

- 12 Use the equation to answer the questions:

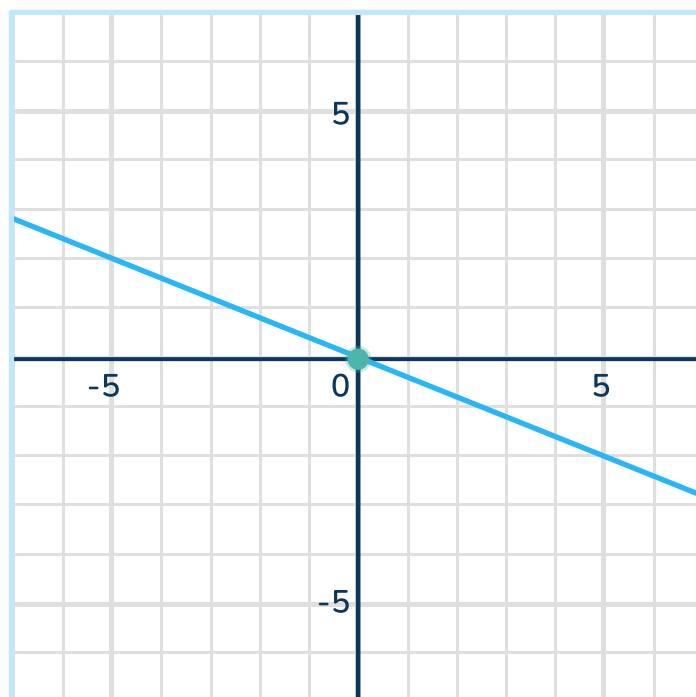
$$3x - 2y = -6$$

A) Rewrite the equation in slope intercept form.

Answer

B) Graph the equation.

-
- 13 Write an equation of a line in the form $y = mx + b$ that is parallel to the line graphed below.



Answer

- 14 Write a linear equation that has a rate of change of -7 and a y -intercept of 7.

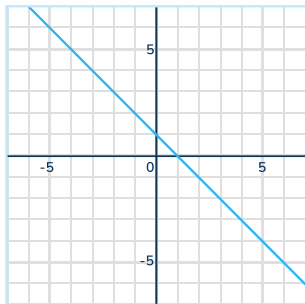
Answer

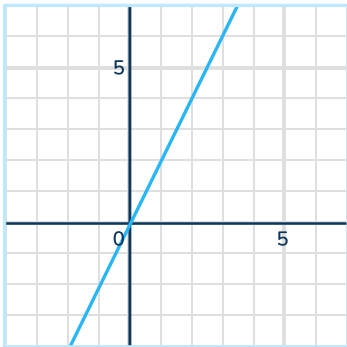
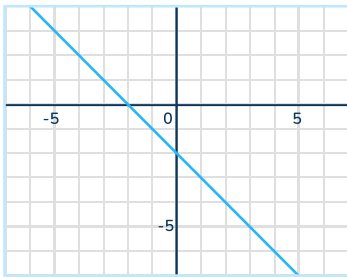
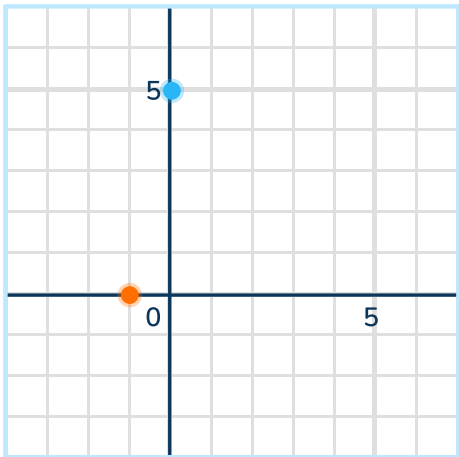
- 15 Write the equation of a line represented by the points in the table below and then graph the line.

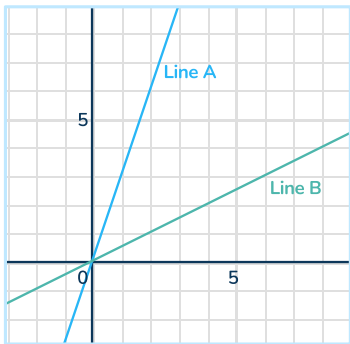
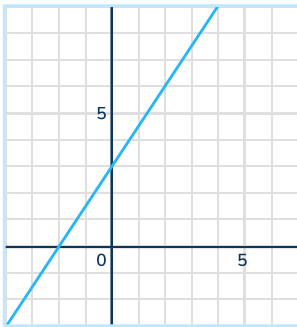
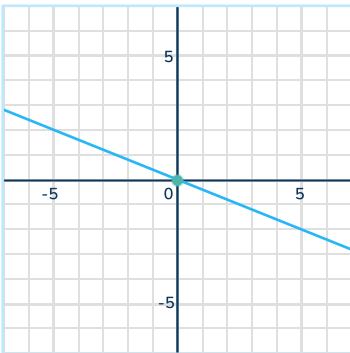
x	y
0	-4
3	-2
6	0

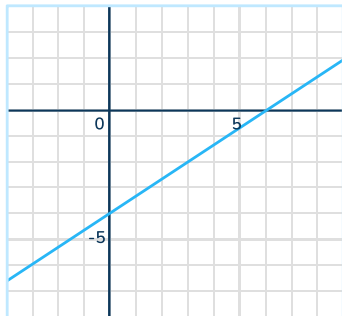
Answer

Answers

Question number	Question	Answers	Standard										
1	Determine the slope and y -intercept of the linear equation, $y = 5x$	Slope = 5 y -intercept = 0	8.F.A.3										
2	Determine the equation of the line from the graph. 	$y = -x + 1$	8.F.A.3 HSF-LE.A.2										
3	From the table, write an equation in the form of $y = mx + b$ <table border="1" data-bbox="470 1283 730 1476"><thead><tr><th>x</th><th>y</th></tr></thead><tbody><tr><td>0</td><td>-1</td></tr><tr><td>1</td><td>1</td></tr><tr><td>2</td><td>3</td></tr><tr><td>3</td><td>5</td></tr></tbody></table>	x	y	0	-1	1	1	2	3	3	5	$y = 2x - 1$	8.F.A.3 HSF-LE.A.2
x	y												
0	-1												
1	1												
2	3												
3	5												
4	Identify the slope and the y -intercept of the equation. $y = 9 - x$	Slope = -1 y -intercept = 9	8.F.A.3										
5	Two points on a line are given, (6, 2) and (0, 5). Write a linear equation in the form $y = mx + b$ that represents the line.	$y = -\frac{1}{2}x + 5$	HSF-LE.A.2										
6	Determine the slope and y -intercept of the linear equation. $2y - 3x = 8$	$y = \frac{3}{2}x + 4$ Slope = $\frac{3}{2}$ y -intercept = 4	HSF-LE.A.2										

Question number	Question	Answers	Standard
7	Graph the line, $y = 2x$		HSF-IF.C.7
8	Graph the line, $y = -x - 2$		HSF-IF.C.7
9	Write the equation of a line that contains the two points graphed on the coordinate plane. 	$y = 5x + 5$	HSF-LE.A.2
10	Determine the slope and y -intercept of the linear equation. $2x - y + 9 = 0$	$y = 2x + 9$ Slope = 2 y -intercept = 9	8.F.A.3

Question number	Question	Answers	Standard
11	<p>Which line has a greater rate of change? Explain</p> 	<p>Line A has a greater rate of change because the slope is 3 and the slope of Line B is $\frac{1}{2}$. Therefore, the rate of change is greater on line A.</p>	HSF-IF.C.7
12	<p>Use the equation to answer the questions: $3x - 2y = -6$</p> <p>A) Rewrite the equation in slope intercept form. B) Graph the equation.</p>	<p>A) $-2y = -3x - 6$ $y = \frac{3}{2}x + 3$</p> <p>B) </p>	HSF-IF.C.7
13	<p>Write an equation of a line in the form $y = mx + b$ that is parallel to the line graphed below.</p> 	<p>Answers vary. Possible answer: $y = -\frac{2}{5}x + 3$</p>	HSF-IF.C.7
14	<p>Write a linear equation that has a rate of change of -7 and a y-intercept of 7.</p>	<p>$y = -7x + 7$</p>	HSF-IF.C.7




Question number	Question	Answers	Standard								
15	<p>Write the equation of a line represented by the points in the table below and then graph the line.</p> <table><tr><th>x</th><th>y</th></tr><tr><td>0</td><td>-4</td></tr><tr><td>3</td><td>-2</td></tr><tr><td>6</td><td>0</td></tr></table>	x	y	0	-4	3	-2	6	0	$y = \frac{2}{3}x - 4$ 	HSF-IF.C.7
x	y										
0	-4										
3	-2										
6	0										

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