

The TAKEAWAY

A linear function is a function whose graph is a picture of a straight line. All the ordered pairs on the line represent all the input and output values of the function.

In order to graph a linear function, create a table of values.

In general, when choosing the x-values for the table, use -2, -1, 0, 1, 2 when the coefficient of x is an integer and use multiples of the denominator when the coefficient of x is a fraction.

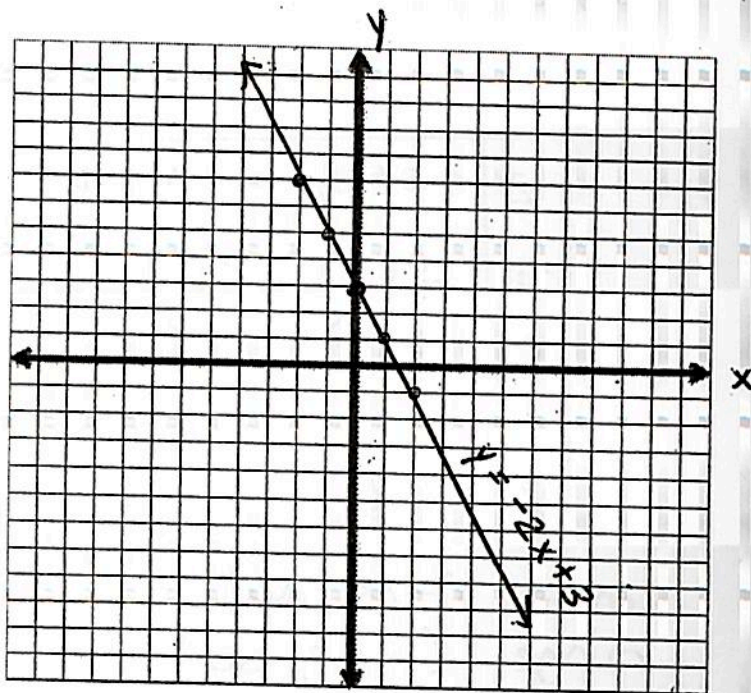
8 Algebra CC

HW #

Set up a table of values and draw the graph of each function. State the domain and range in interval notation.

1) $y = -2x + 3$

x	$-2x+3$	y	(x,y)
-2	$-2(-2)+3$	7	$(-2,7)$
-1	$-2(-1)+3$	5	$(-1,5)$
0	$-2(0)+3$	3	$(0,3)$
1	$-2(1)+3$	1	$(1,1)$
2	$-2(2)+3$	-1	$(2,-1)$

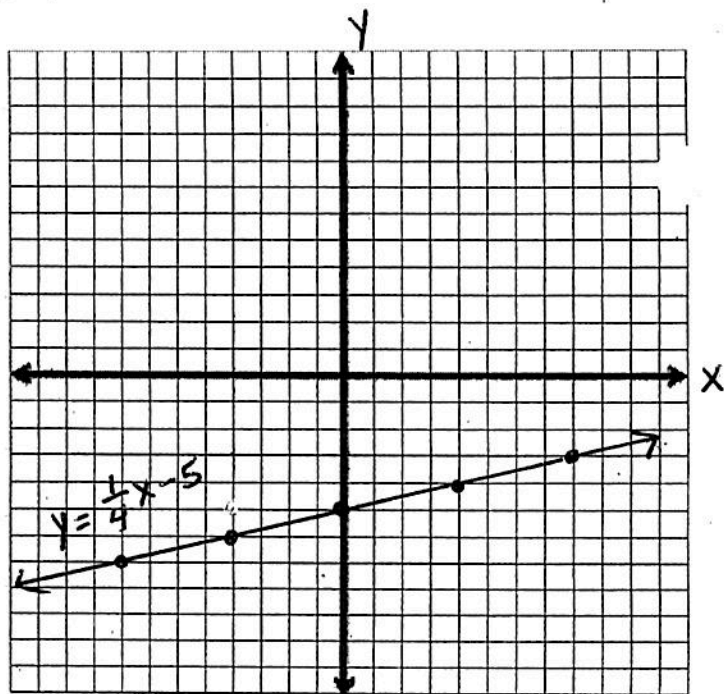


domain: $(-\infty, \infty)$

range: $(-\infty, \infty)$

$$2) y = \frac{1}{4}x - 5$$

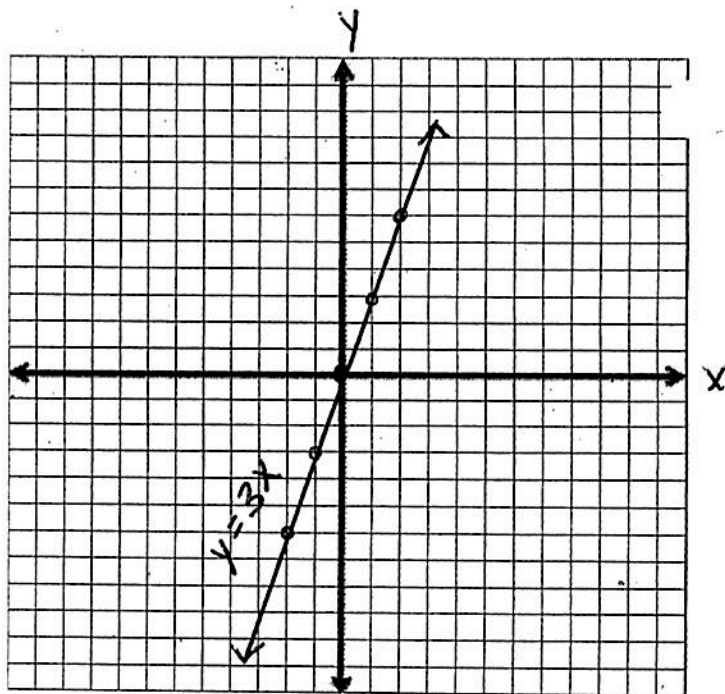
x	$\frac{1}{4}x - 5$	y	(x, y)
-8	$\frac{1}{4}(-8) - 5$	-7	(-8, -7)
-4	$\frac{1}{4}(-4) - 5$	-6	(-4, -6)
0	$\frac{1}{4}(0) - 5$	-5	(0, -5)
4	$\frac{1}{4}(4) - 5$	-4	(4, -4)
8	$\frac{1}{4}(8) - 5$	-3	(8, -3)



domain $(-\infty, \infty)$
range $(-\infty, \infty)$

$$3) y = 3x$$

x	3x	y	(x, y)
-2	3(-2)	-6	(-2, -6)
-1	3(-1)	-3	(-1, -3)
0	3(0)	0	(0, 0)
1	3(1)	3	(1, 3)
2	3(2)	6	(2, 6)



domain $(-\infty, \infty)$
range $(-\infty, \infty)$

Determine if the point $(-25.25, -75.75)$ is part of the function $y = 3x$. Justify your response.

$$y = 3x$$

$$-75.75 = 3(-25.25)$$

$$-75.75 = -75.75$$

✓

Yes, the point is part of the function $y = 3x$ because it makes the equation true.