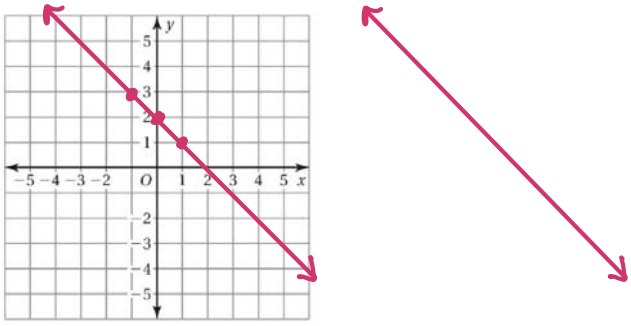
Name: _____ Period: _____

4.1 – Graphing Linear Equations

Graph the equations by using an input/output table with at least 3 ordered pair solutions.

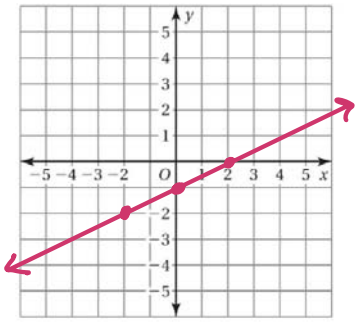
1) $y = -x + 2$

x	-1	0	1
y	3	2	1



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

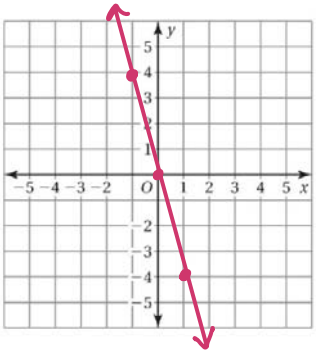
x	$\frac{1}{2}x-1$	y
-2	$\frac{1}{2}(-2)-1$	-2
0	$\frac{1}{2}(0)-1$	-1
2	$\frac{1}{2}(2)-1$	0



Graph the equations by ***<u>using an input/output table</u>*** with at least 3 ordered pair solutions.

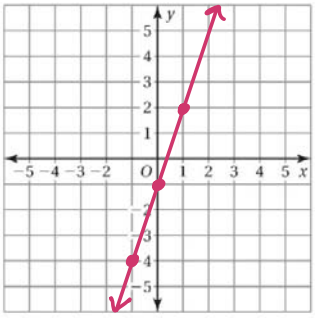
3) $y = -4x$

x	y
-1	4
0	0
1	-4



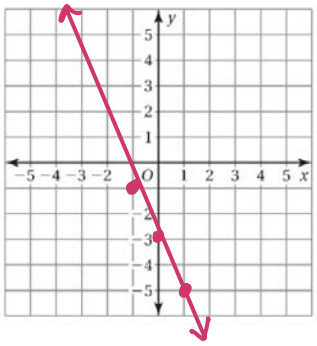
4) $y = 3x - 1$

x	y
-1	-4
0	-1
1	2



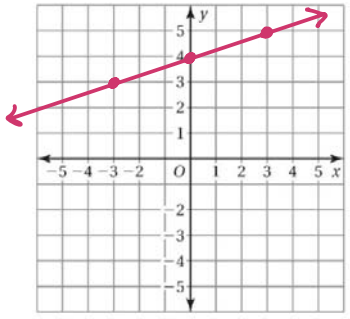
5) $y = -2x - 3$

x	y
-1	-1
0	-3
1	-5



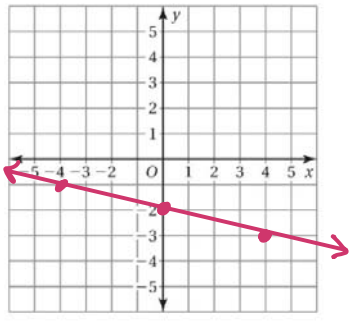
6) $y = \frac{1}{3}x + 4$

x	y
-3	3
0	4
3	5



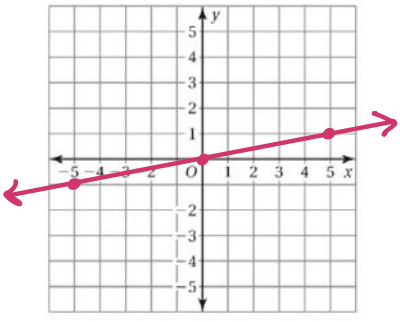
7) $y = -\frac{1}{4}x - 2$

x	y
-4	-1
0	-2
4	-3



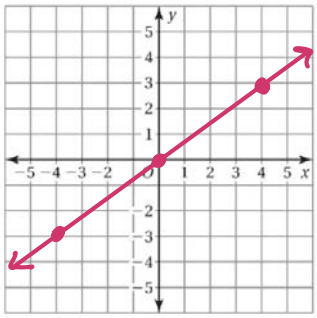
8) $y = \frac{1}{5}x$

x	y
-5	-1
0	0
5	1



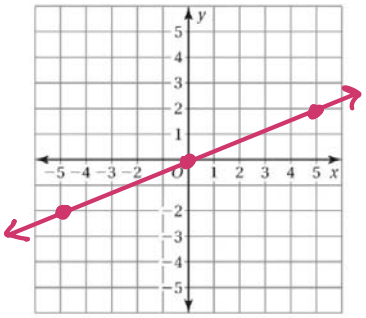
9) $y = \frac{3}{4}x$

x	y
-4	-3
0	0
4	3



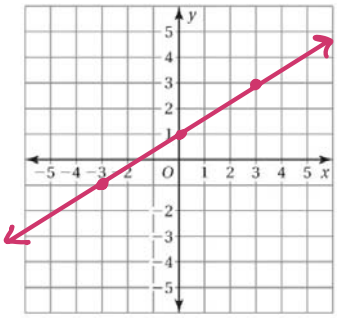
10) $y = \frac{2}{5}x$

x	y
-5	-2
0	0
5	2



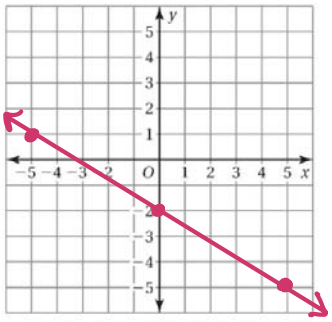
11) $y = \frac{2}{3}x + 1$

x	y
-3	-1
0	1
3	3



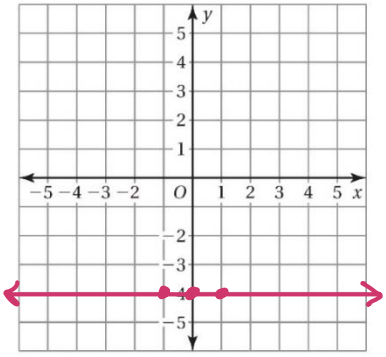
12) $y = -\frac{3}{5}x - 2$

x	y
-5	1
0	-2
5	-5



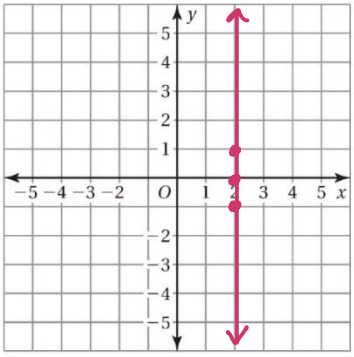
13) $y = -4$

x	y
-1	-4
0	-4
1	-4



14) $x = 2$

x	y
2	-1
2	0
2	1



Solve (isolate) for y.

15) $2x + y = 7$

$-2x \quad -2x$

$y = -2x + 7$

16) $-8x + y = 10$

$+8x \quad +8x$

$y = 8x + 10$

17) $4x + 2y = 8$

$-4x \quad -4x$

$\frac{2y}{2} = \frac{-4x + 8}{2}$

$y = -2x + 4$

18) $-6x - 2y = 16$

$+6x \quad +6x$

$\frac{-2y}{-2} = \frac{6x + 16}{-2}$

$y = -3x - 8$

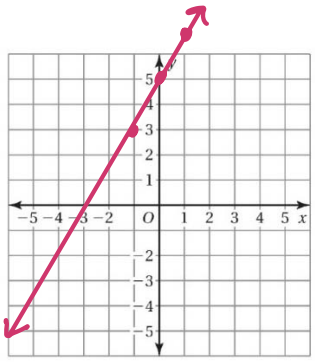
Solve (isolate) for y. Then graph the equation.

19) $y - 2x = 5$

$+2x \quad +2x$

$y = 2x + 5$

x	y
-1	3
0	5
1	7



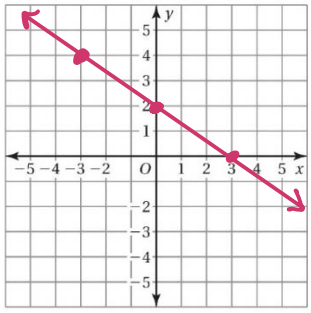
20) $2x + 3y = 6$

$-2x \quad -2x$

$\frac{3y}{3} = \frac{-2x+6}{3}$

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

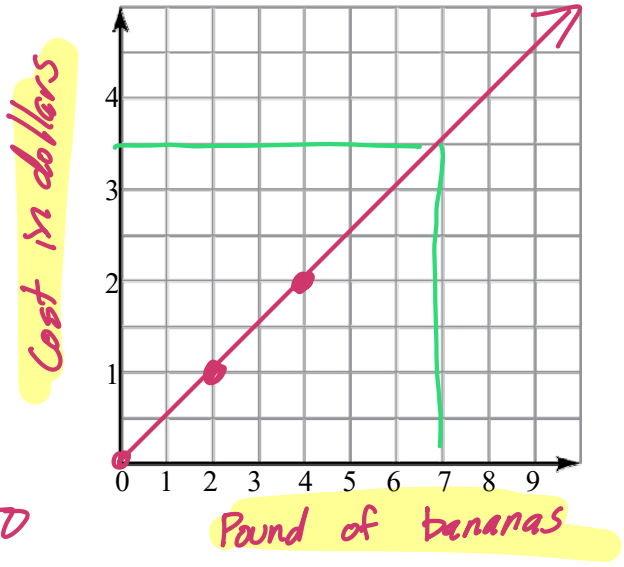
x	y
-3	4
0	2
3	0



9) The equation $y = \frac{1}{2}x$ represents the cost y (in dollars) for x pounds of bananas.

a) Graph the equation.

x	y
0	0
2	1
4	2



b) Use the graph to estimate the cost of 7 pounds of bananas.

$3.50

c) Use the equation to find the exact cost of 7 pounds of bananas.

$y = \frac{1}{2}(7)$

$y = 3.5 = \$3.50$

10) The equation $y = 2.5x + 35$ represents the cost y (in dollars) of the family meal when the food costs \$35 and x beverages are purchased.

a) Graph the equation.

$y = 2.5x + 35$

$y = \frac{5}{2}x + 35$

x	y
0	35
2	40
4	45

b) Use the graph to estimate the cost of the family meal when 5 beverages are purchased.

$47.50

c) Use the equation to find the exact cost of the family meal when 5 beverages are purchased.

$y = 2.5(5) + 35$

$y = 12.50 + 35 = \boxed{\$47.50}$