Warm Up Grade 7

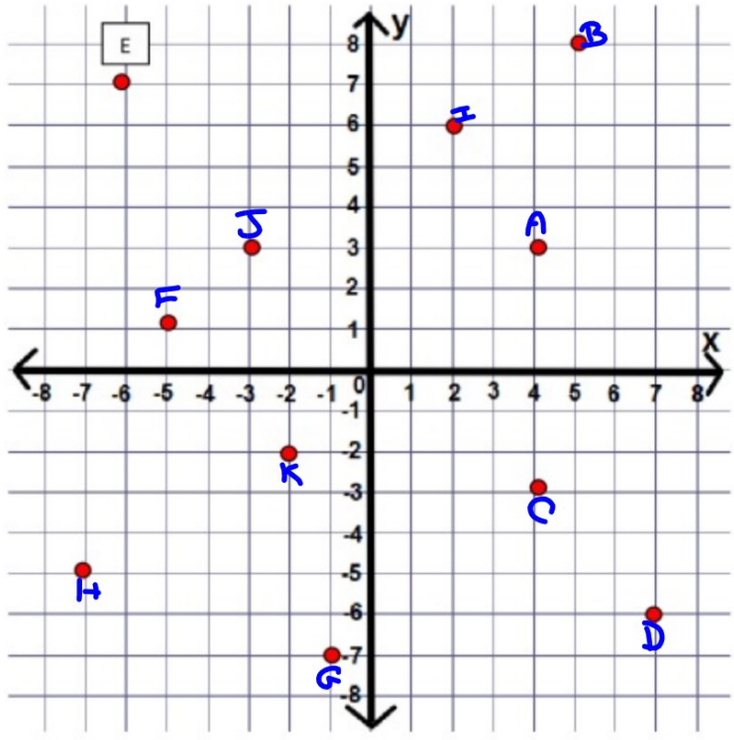
Date:

(x, y)

1) Use these coordinates to label the points on the grid from A – K.

A= (4,3) B = (5,8) C = (4,-3) D = (7,-6) E = (-6,7) F = (-5,1) G = (-1, -7)

H = (-7, -5) I = (2,6) J = (-3, 3) K = (-2, -2)

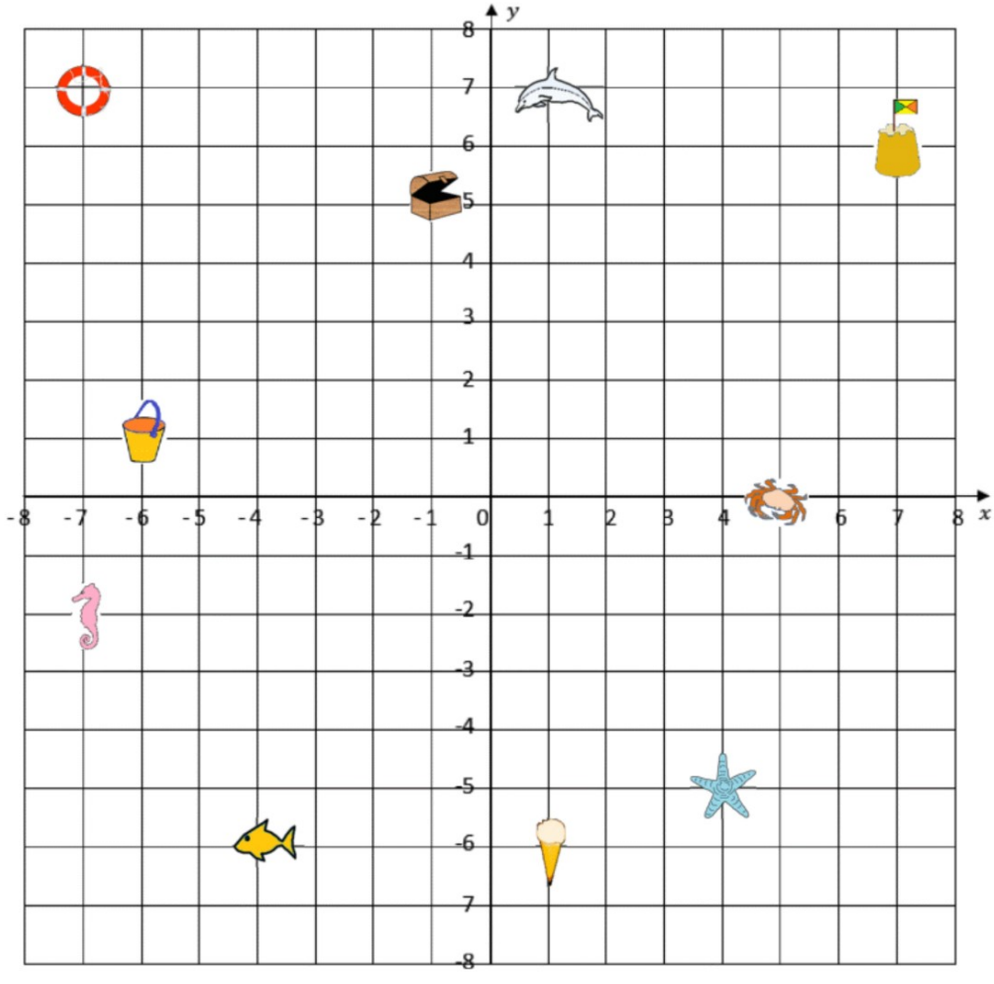


Name

Homework Solutions

FIND THE COORDINATES 2

Use the coordinate grid to work out the coordinates below.



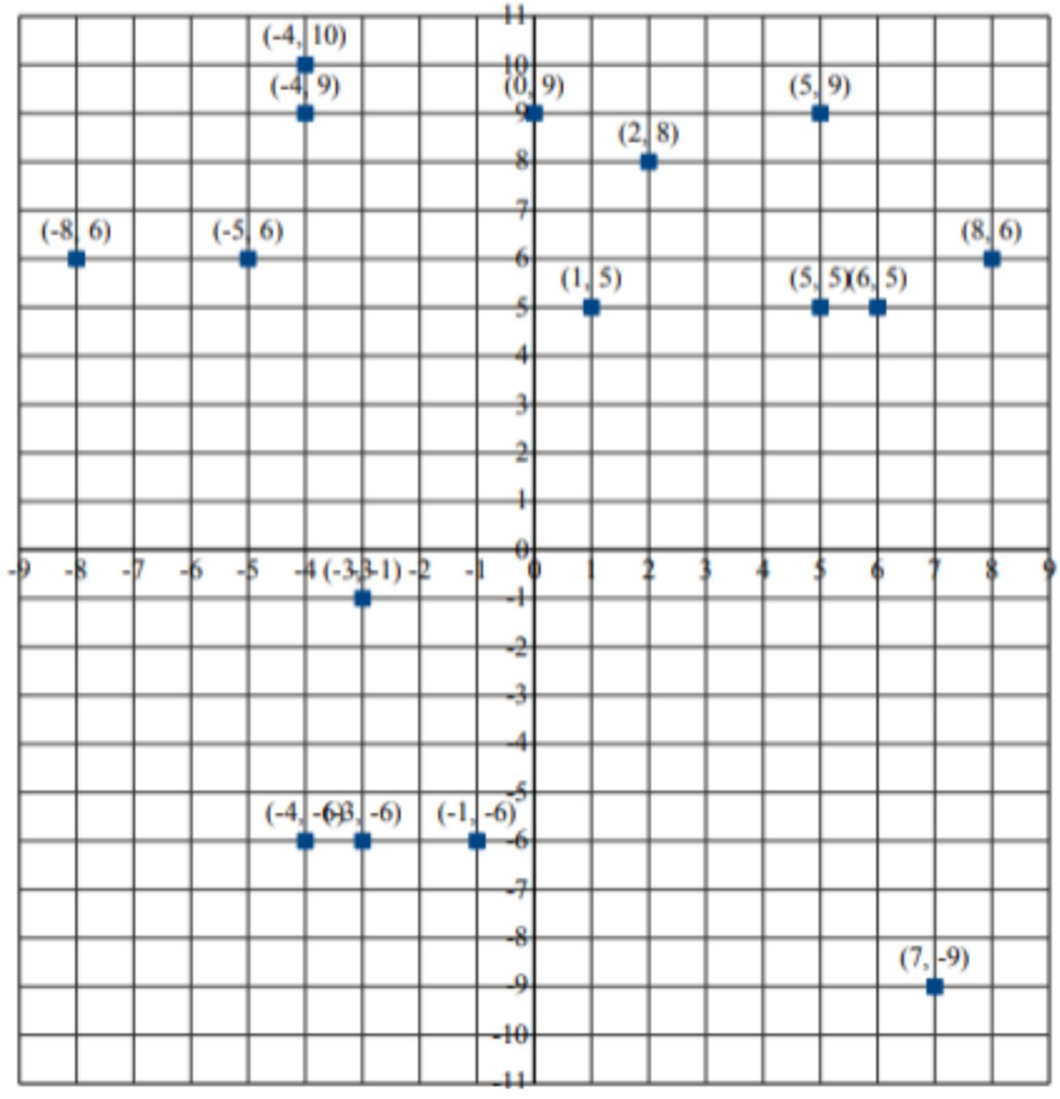
1) Dolphin (1, 7)
2) Sandcastle (7, 6)
3) Chest (-1, 5)
4) Bucket (-6, 1)
5) Fish (-4, -6)
6) Starfish (4, -5)
7) Seahorse (-7, -2)
8) Crab (5, 0)
9) Ice cream (1, -6)
10) Life ring (-7, 7)

Homework Solutions

Plotting Coordinate Points (A) Answers

Plot the coordinate points below.

(-4, 10)	(7, -9)	(0, 9)	(-8, 6)	(-4, -6)	(6, 5)	(-3, -1)	(5, 5)
(-5, 6)	(-3, -6)	(-1, -6)	(5, 9)	(8, 6)	(1, 5)	(-4, 9)	(2, 8)

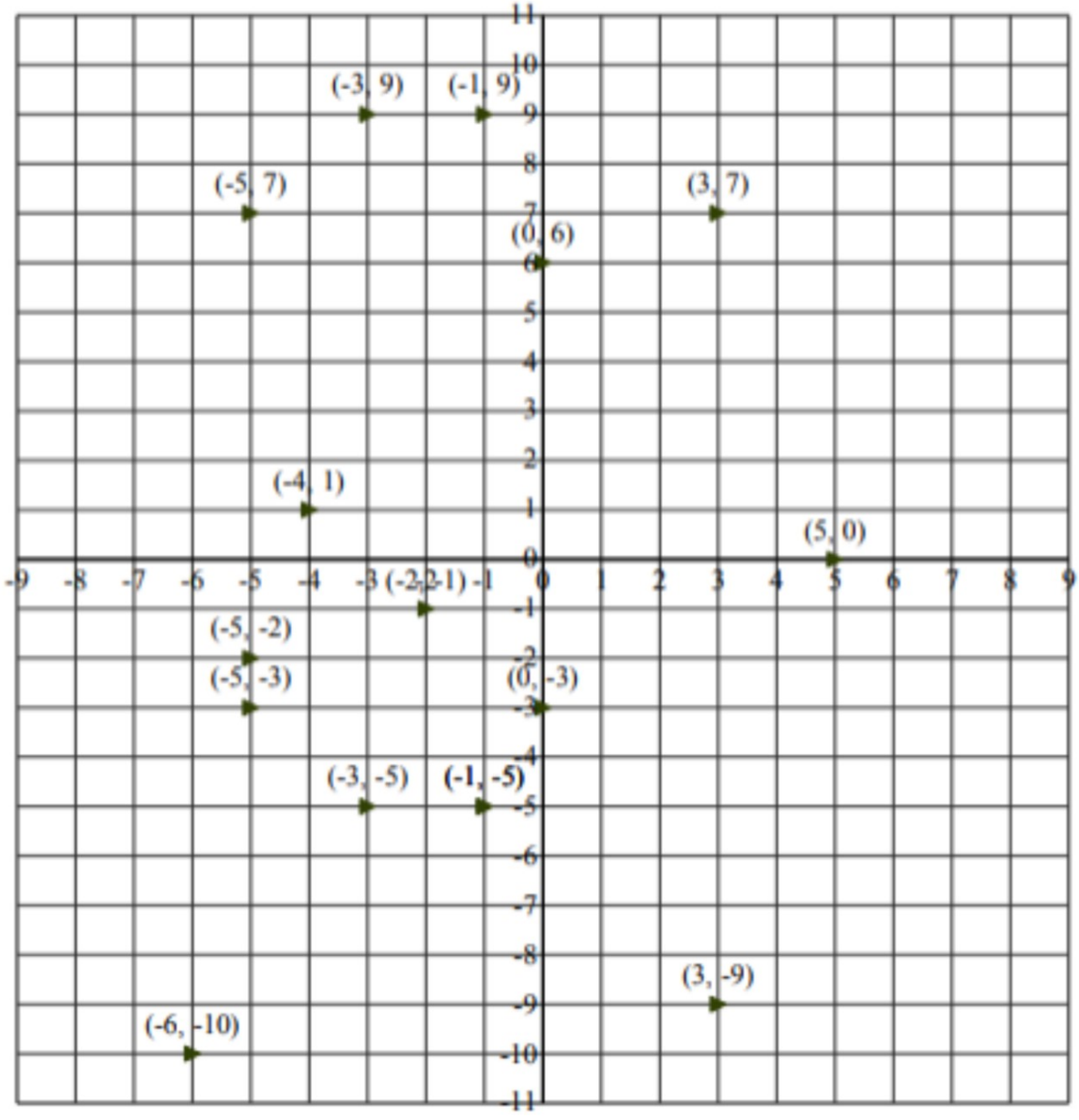


Homework Solutions

Plotting Coordinate Points (E) Answers

Plot the coordinate points below.

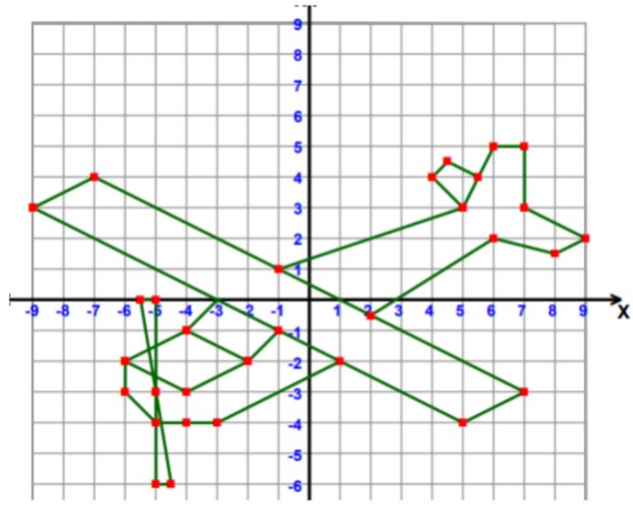
(-2, -1)	(0, -3)	(-3, -5)	(-6, -10)	(-4, 1)	(3, 7)	(-5, -3)	(3, -9)
(-1, -5)	(-3, 9)	(0, 6)	(-1, -5)	(5, 0)	(-5, 7)	(-1, 9)	(-5, -2)



Homework Solutions

Connect each sequence of points with a line.

(-3,0) , (-4,-1) , (-6,-2) , (-6,-3) , (-5,-4) , (-4,-4) , (-3,-4) , (1,-2) End of Sequence
(-1,1) , (5,3) , (6,5) , (7,5) , (7,3) , (9,2) , (8,1.5) , (6,2) , (2,-.5) End of Sequence
(-5,-3) , (-5.5,0) , (-5,0) , (-5,-6) , (-4.5,-6) , (-5,-3) End of Sequence
(-9,3) , (-7,4) , (7,-3) , (5,-4) , (-9,3) End of Sequence
(-6,-2) , (-4,-3) , (-2,-2) , (-1,-1) End of Sequence
(5,3) , (4,4) , (4.5,4.5) , (5.5,4) End of Sequence
(-4,-1) , (-2,-2) End of Sequence



Recall from Grade 6

TABLES REPRESENT ORDERED PAIRS!!!

TABLE

INPUT (x)	OUTPUT (y)
0	3
3	9
6	15
9	21

ORDERED PAIRS

In Out

x	y	(x,y)
0	3	(0,3)
3	9	(3,9)
6	15	(6,15)
9	21	(9,21)

This is important because, given ordered pairs, we can graph these points!

Review of Grade 6 Input/Output Tables

$y = 3x$

Show work you do on calculator here for the first 3 entries (first 3 x-values)

Then should see pattern

x	y	Ordered Pairs
-2	-6	(-2, -6)
-1	-3	(-1, -3)
0	0	(0, 0)
1	3	(1, 3)
2	6	(2, 6)
3	9	(3, 9)

x= -2

$y = 3x$

$y = 3(-2)$

$y = -6$

$(-2, -6)$

x= -1

$y = 3x$

$= 3(-1)$

$= (-3)$

$(-1, -3)$

x= 0

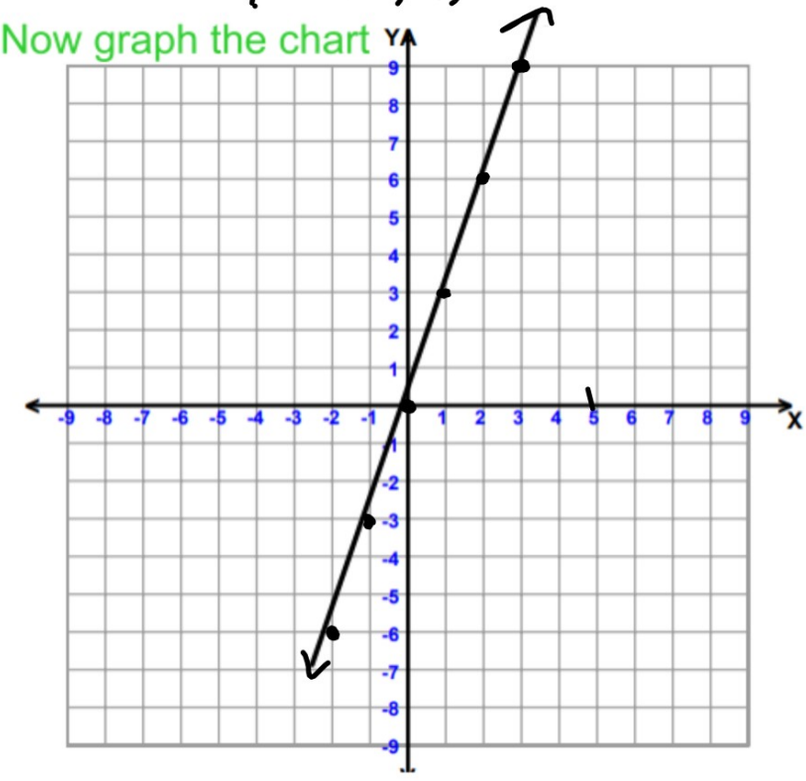
$y = 3x$

$y = 3(0)$

$y = 0$

$(0, 0)$

Now graph the chart



You try

$y = x - 4$

Show work you do on calculator here for the first 3 entries (first 3 x-values)

Then should see pattern

x	y	Ordered Pairs
-2	-6	(-2,-6)
-1	-5	(-1,-5)
0	-4	(0,-4)
1	-3	(1,-3)
2	-2	(2,-2)
3	-1	(3,-1)

x= -2

$y = x - 4$

$y = (-2) - 4$

$y = -6$

x= -1

$y = x - 4$

$y = (-1) - 4$

$y = -5$

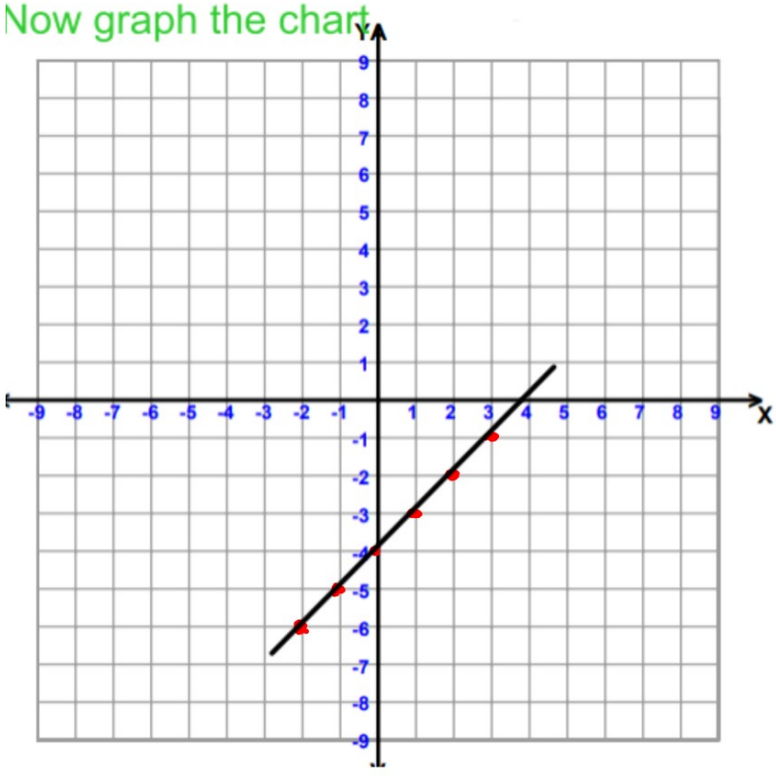
x= 0

$y = x - 4$

$y = (0) - 4$

$y = -4$

Now graph the chart



Sometimes we get to pick our x values

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

Pick x-values that work best (x-vales that divide by ___.

Still show work you do on calculator here for the first 3 entries (first 3 x-values)

Then should see pattern

x	y	Ordered Pairs
-20	-4	(-20, -4)
-15	-3	(-15, -3)
-10	-2	(-10, -2)
-5	-1	(-5, -1)
0	0	(0, 0)
5	1	(5, 1)
10	2	(10, 2)

x = -20

$y = \frac{x}{5}$ ← ÷

$y = \frac{(-20)}{5}$

y = -4

x = -15

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

$y = \frac{(-15)}{5}$

y = -3

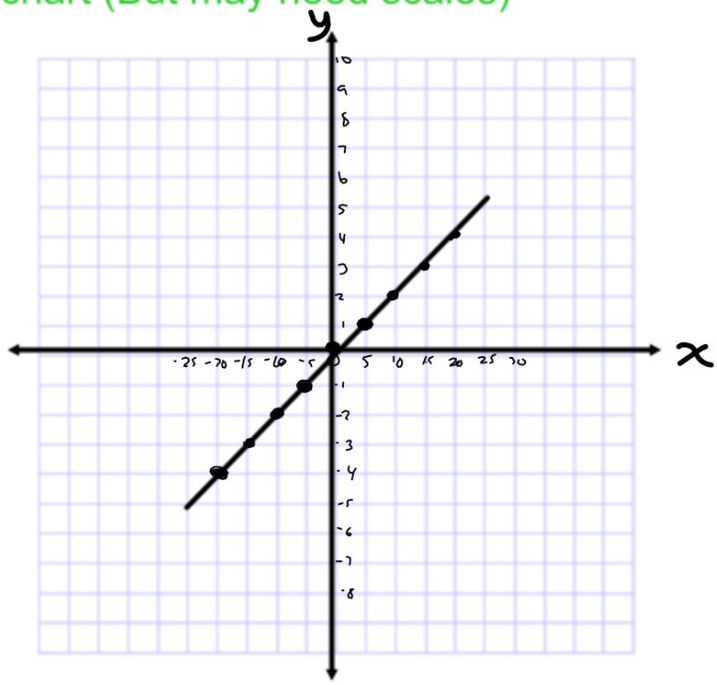
x = -10

$y = \frac{x}{5}$ ← ÷

$y = \frac{(-10)}{5}$

y = -2

Now graph the chart (But may need scales)



Let's try $y = 2x + 1$

Still show work you do on calculator here for the first 3 entries (first 3 x-values) Then should see pattern

$2(\ ) + 1$ multiply

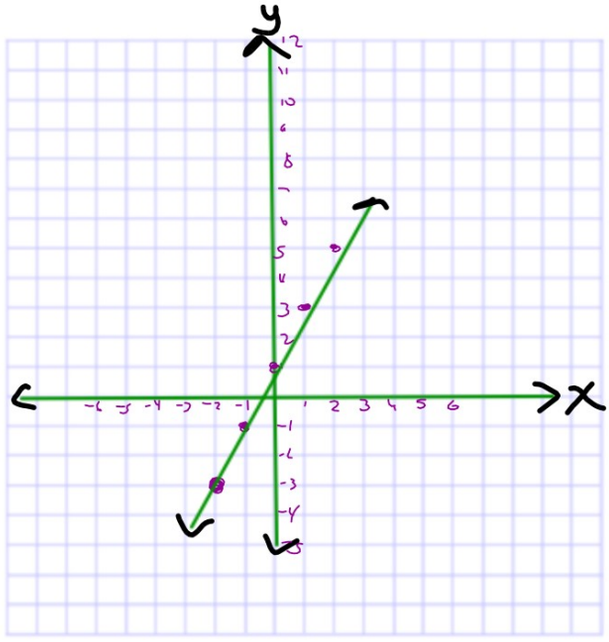
x	y	Ordered Pairs
-2	-3	(-2, -3)
-1	-1	(-1, -1)
0	1	(0, 1)
1	3	(1, 3)
2	5	(2, 5)

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

$x = -1$: $y = 2x + 1$, $y = 2(-1) + 1$, $(-2) + 1$, -1

$x = 0$: $y = 2x + 1$, $y = 2(0) + 1$, $0 + 1$, 1

Now graph the chart (But may need scales)



Class / Homework

Create tables using substitution- Worksheet

a) y = x+10

b) y = 4x

c) y = 3x -1

d) y= x-1

e) $y = \frac{x}{2}$

f) y= 2x + 4

c)

x	y
-2	
-1	
0	
1	
2	

e)

x	y
-4	
-2	
0	
2	
4	

Do out each input/output and show work for each first 3 entries. Pick x-values that are both negative and positive (usually x= -2, -1, 0, 1, 2 (except for part e above)). Then graph on your own graph paper. Label the each axis and include a scale.

Homework Solutions On next pages

Create tables using substitution- Worksheet

a) $y = x+10$

b) $y = 4x$

c) $y = 3x - 1$

d) $y = x - 1$

e) $y = \frac{x}{2}$

f) $y = 2x + 4$

Do out each input/output and show work for each first 3 entries. Then graph on your own graph paper. Label the each axis and include a scale.

Homework Solutions

a) $y = x+10$

x	y
-2	8
-1	9
0	10
1	11
2	12

up 1

$x = -2$

$y = (-2) + 10$

$= 8$

$x = -1$

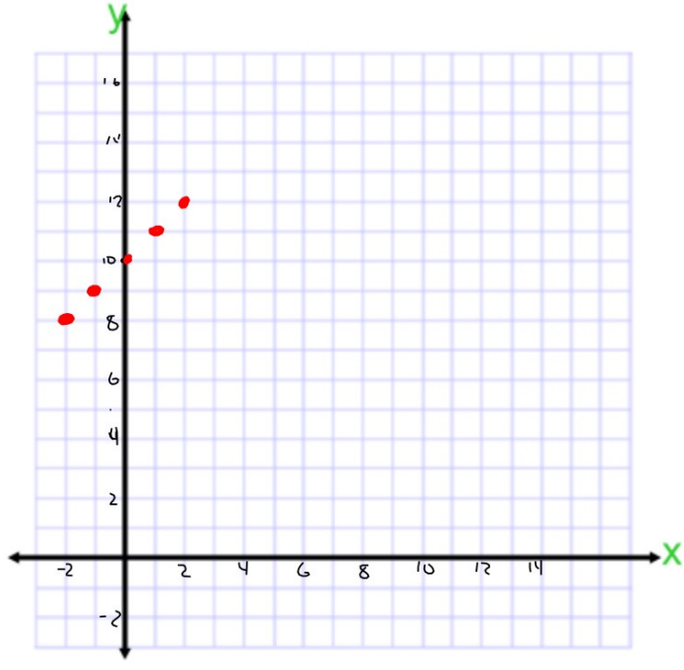
$y = (-1) + 10$

$= 9$

$x = 0$

$y = (0) + 10$

$= 10$



Homework Solutions

a) $y = 3x - 1$

x	y
-2	-7
-1	-4
0	-1
1	2
2	5

up 3

$x = -2$

$y = 3(-2) - 1$

$= -6 - 1$

$= -7$

$x = -1$

$y = 3(-1) - 1$

$= -3 - 1$

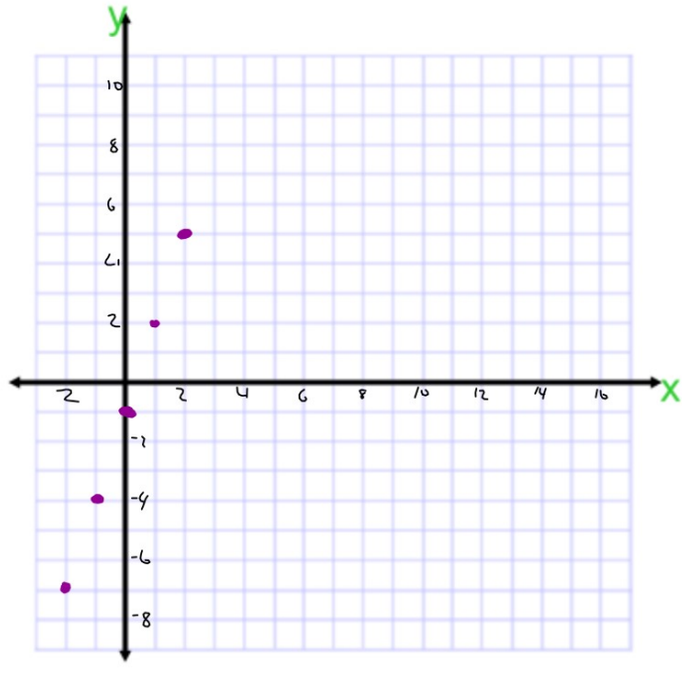
$= -4$

$x = 0$

$y = 3(0) - 1$

$= 0 - 1$

$= -1$



Homework Solutions

a) $y = 4x$

x	y
-2	-8
-1	-4
0	0
1	4
2	8

up 4

$x = -2$

$y = 4(-2)$

$= -8$

$x = -1$

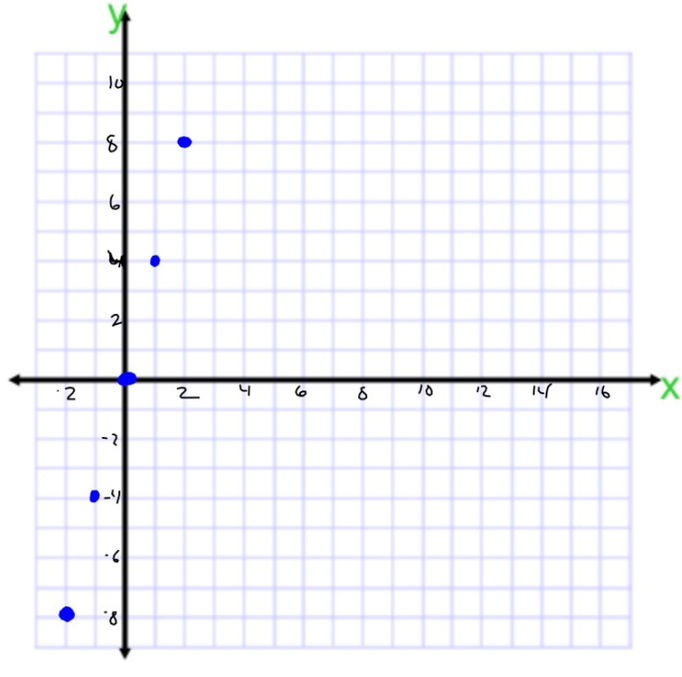
$y = 4(-1)$

$= -4$

$x = 0$

$y = 4(0)$

$= 0$



Homework Solutions

a) $y = x-1$

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

up 1

$x = -2$

$y = (-2) - 1$

$= -3$

$x = -1$

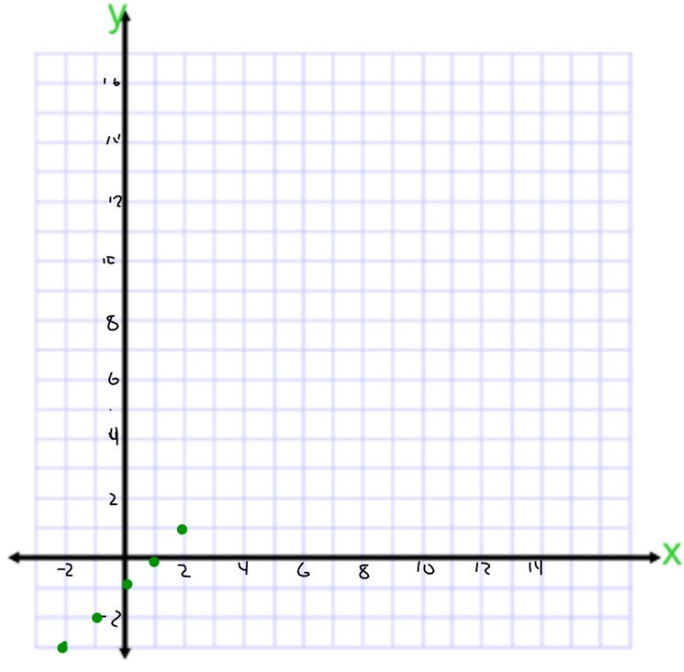
$y = (-1) - 1$

$= -2$

$x = 0$

$y = (0) - 1$

$= -1$



Homework Solutions

a) $y = x/2$

x	y
-2	-1
0	0
2	1
4	2
6	3

up 1

$x = -2$

$y = -2 \div 2$

$= -1$

$x = 0$

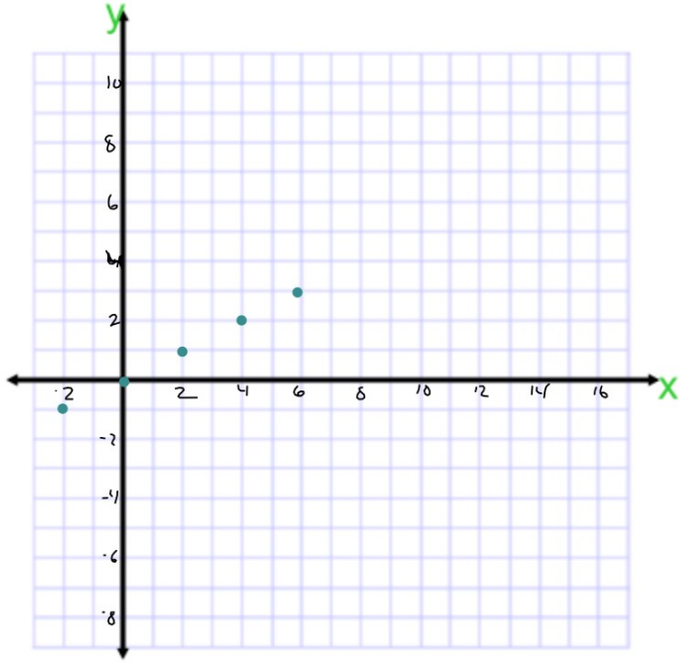
$y = 0 \div 2$

$= 0$

$x = 2$

$y = 2 \div 2$

$= 1$



Homework Solutions

a) $y = 2x + 4$

x	y
-2	0
-1	2
0	4
1	6
2	8

up 2

$x = -2$

$y = 2(-2) + 4$

$= -4 + 4$

$= 0$

$x = -1$

$y = 2(-1) + 4$

$= -2 + 4$

$= 2$

$x = 0$

$y = 2(0) + 4$

$= 0 + 4$

$= 4$