MTH1W Name_____

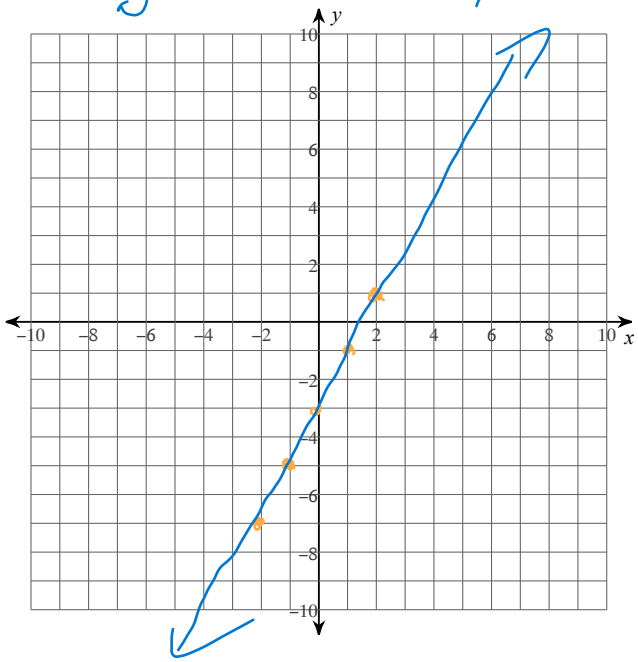
6.2 Graphing Linear Equations Part 2

Date_____

Create a table of values as in the notes. Plot the points, that fit in the graph, then draw the line.

1) $2x - y = 3$

$2x - 3 = y$

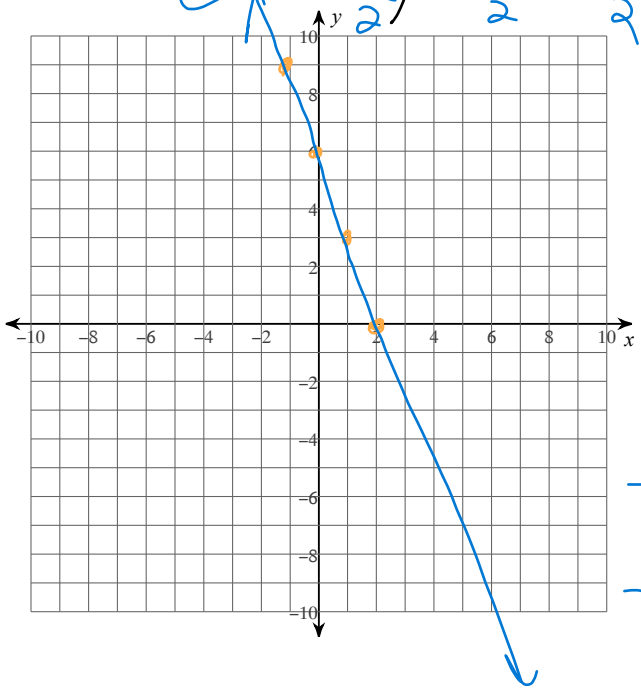


x	$y = 2x - 3$	(x, y)
2	$2(2) - 3 = 1$	(2, 1)
1	$2(1) - 3 = -1$	(1, -1)
0	$2(0) - 3 = -3$	(0, -3)
-1	$2(-1) - 3 = -5$	(-1, -5)
-2	$2(-2) - 3 = -7$	(-2, -7)

2) $6x + 2y - 12 = 0$

$\frac{2y}{2} = \frac{-6x}{2} + \frac{12}{2}$

$y = -3x + 6$

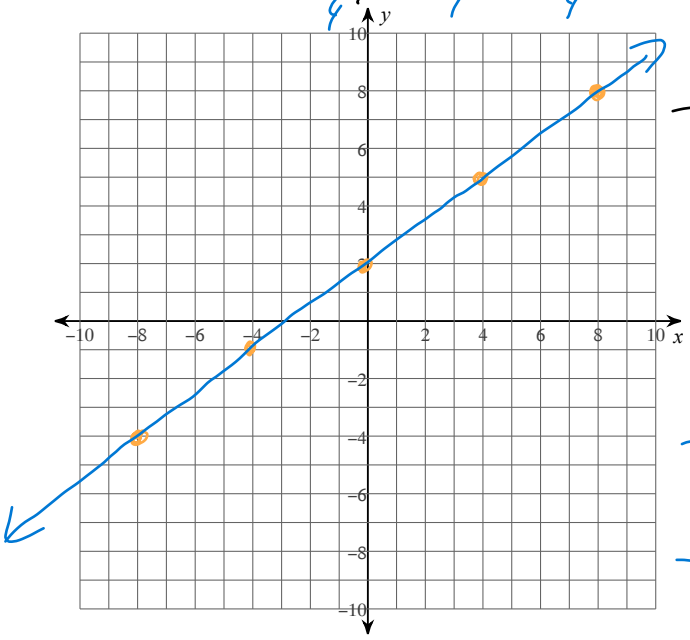


x	$y = -3x + 6$	(x, y)
2	$-3(2) + 6 = 0$	(2, 0)
1	$-3(1) + 6 = 3$	(1, 3)
0	$-3(0) + 6 = 6$	(0, 6)
-1	$-3(-1) + 6 = 9$	(-1, 9)
-2	$-3(-2) + 6 = 12$	(-2, 12)

3) $4y - 3x = 8$

$\frac{4y}{4} = \frac{3x}{4} + \frac{8}{4} \rightarrow y = \frac{3}{4}x + 2$

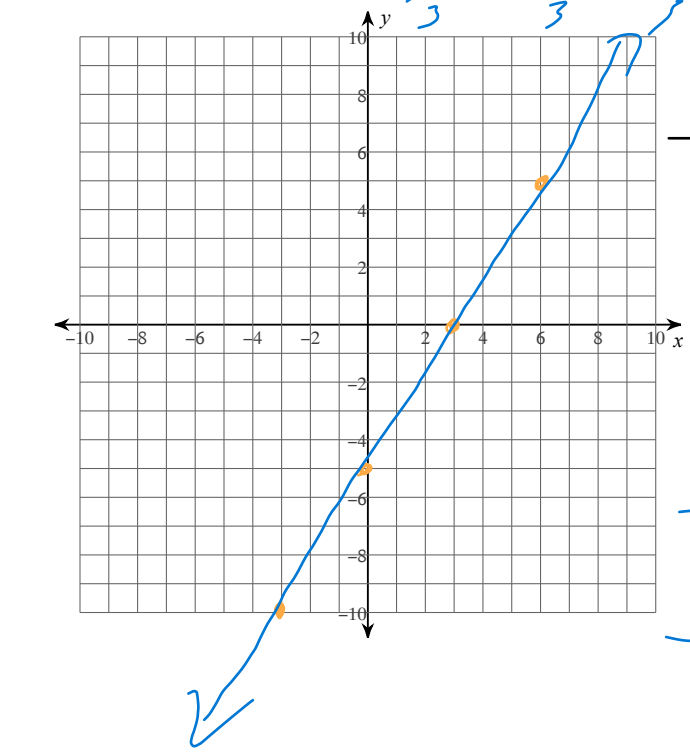
4 → multiples of 4



x	$y = \frac{3}{4}x + 2$	(x, y)
8	$\frac{3}{4}(8) + 2 = 8$	(8, 8)
4	$\frac{3}{4}(4) + 2 = 5$	(4, 5)
0	$\frac{3}{4}(0) + 2 = 2$	(0, 2)
−4	$\frac{3}{4}(-4) + 2 = -1$	(−4, −1)
−8	$\frac{3}{4}(-8) + 2 = -4$	(−8, −4)

4) $5x - 3y - 15 = 0$

$\frac{5x}{3} - \frac{15}{3} = \frac{3y}{3} \rightarrow \frac{5}{3}x - 5 = y$

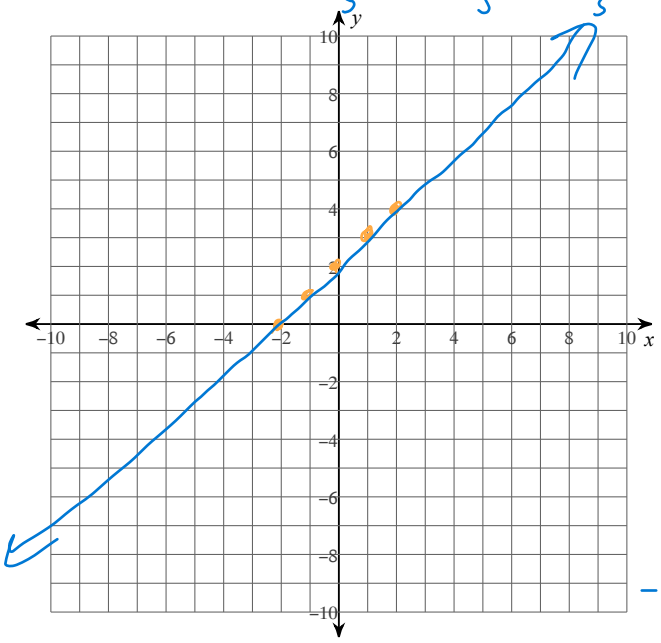


x	$y = \frac{5}{3}x - 5$	(x, y)
6	$\frac{5}{3}(6) - 5 = 5$	(6, 5)
3	$\frac{5}{3}(3) - 5 = 0$	(3, 0)
0	$\frac{5}{3}(0) - 5 = -5$	(0, −5)
−3	$\frac{5}{3}(-3) - 5 = -10$	(−3, −10)
−6	$\frac{5}{3}(-6) - 5 = -15$	(−6, −15)

5) $-5x + 5y = 10$

$\frac{5y}{5} = \frac{5x}{5} + \frac{10}{5}$

$y = x + 2$

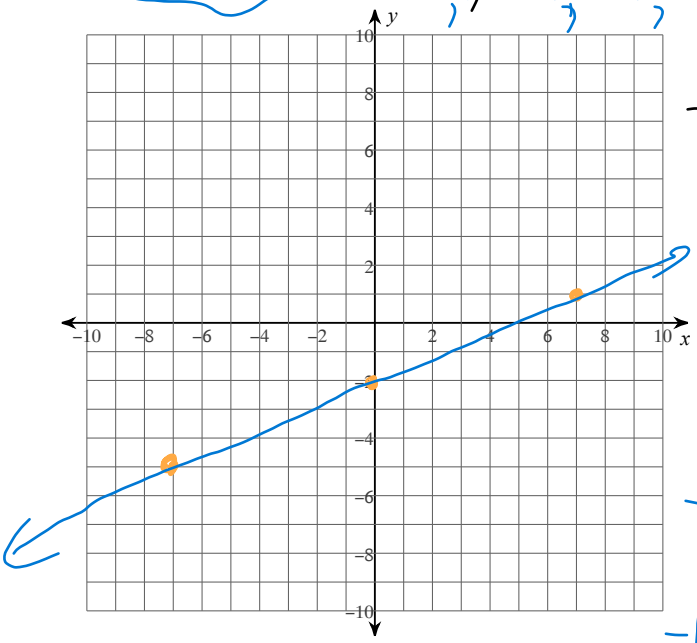


x	$y = x + 2$	(x, y)
2	$(2) + 2 = 4$	$(2, 4)$
1	$(1) + 2 = 3$	$(1, 3)$
0	$(0) + 2 = 2$	$(0, 2)$
-1	$(-1) + 2 = 1$	$(-1, 1)$
-2	$(-2) + 2 = 0$	$(-2, 0)$

6) $14 - 3x + 7y = 0$ $\rightarrow$ $7y = 3x - 14$

$\frac{7y}{7} = \frac{3x}{7} - \frac{14}{7}$

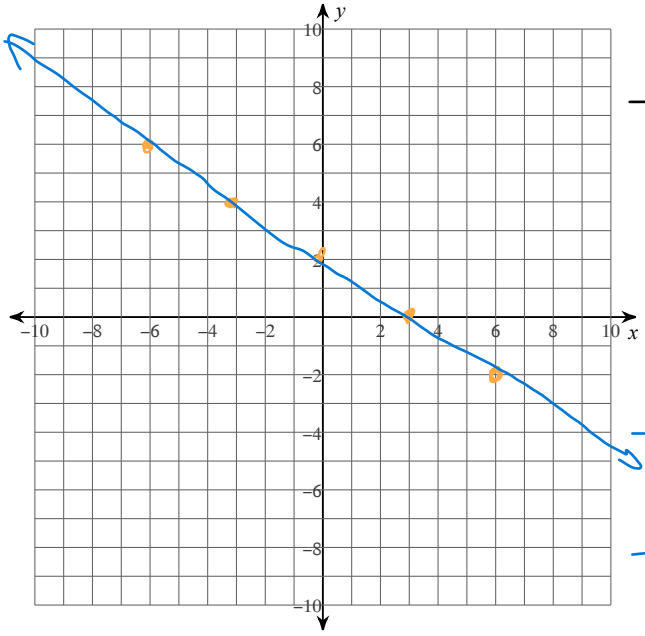
$y = \frac{3}{7}x - 2$



x	$y = \frac{3}{7}x - 2$	(x, y)
14	$\frac{3}{7}(14) - 2 = 4$	$(14, 4)$
7	$\frac{3}{7}(7) - 2 = 1$	$(7, 1)$
0	$\frac{3}{7}(0) - 2 = -2$	$(0, -2)$
-7	$\frac{3}{7}(-7) - 2 = -5$	$(-7, -5)$
-14	$\frac{3}{7}(-14) - 2 = -8$	$(-14, -8)$

7) $18y + 12x = 36$

$\frac{18y}{18} = \frac{-12x}{18} + \frac{36}{18} \rightarrow y = \frac{-12}{18}x + 2 \rightarrow y = -\frac{2}{3}x + 2$



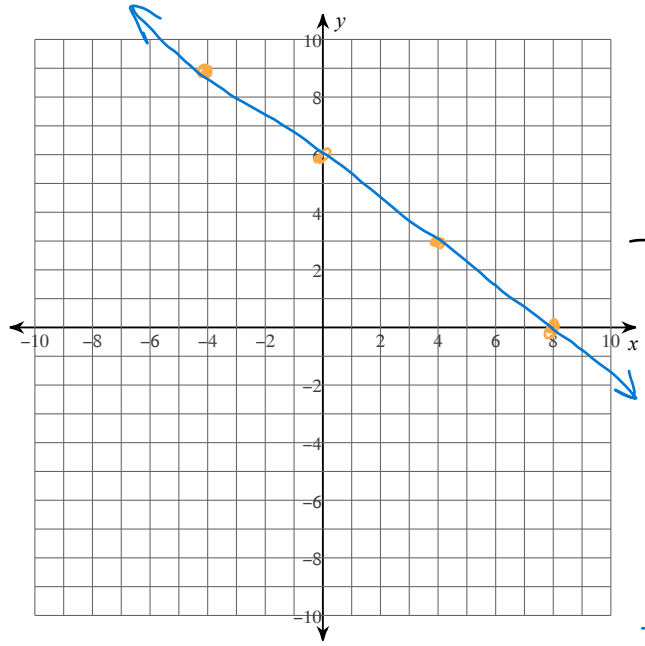
x	$y = -\frac{2}{3}x + 2$	(x, y)
6	$-\frac{2}{3}(6) + 2 = -2$	$(6, -2)$
3	$-\frac{2}{3}(3) + 2 = 0$	$(3, 0)$
0	$-\frac{2}{3}(0) + 2 = 2$	$(0, 2)$
-3	$-\frac{2}{3}(-3) + 2 = 4$	$(-3, 4)$
-6	$-\frac{2}{3}(-6) + 2 = 6$	$(-6, 6)$

8) $\left(\frac{1}{2}x + \frac{2}{3}y - 4 = 0\right) \times 6$

CD = 6, multiply everything by 6

$\frac{6}{2}x + \frac{12}{3}y - 24 = 0 \rightarrow 3x + 4y - 24 = 0$

$\frac{4y}{4} = \frac{-3x}{4} + \frac{24}{4}$



x	$y = -\frac{3}{4}x + 6$	(x, y)
8	$-\frac{3}{4}(8) + 6 = 0$	$(8, 0)$
4	$-\frac{3}{4}(4) + 6 = 3$	$(4, 3)$
0	$-\frac{3}{4}(0) + 6 = 6$	$(0, 6)$
-4	$-\frac{3}{4}(-4) + 6 = 9$	$(-4, 9)$
-8	$-\frac{3}{4}(-8) + 6 = 12$	$(-8, 12)$