

Classwork

Opening Exercise

Emily tells you that she scored 32 points in a basketball game. Write down all the possible ways she could have scored 32 with only two- and three-point baskets. Use the table below to organize your work.

Number of Two-Pointers	Number of Three-Pointers
16	0
1	10
4	8
7	6
10	4
13	2

} no
pts
#s

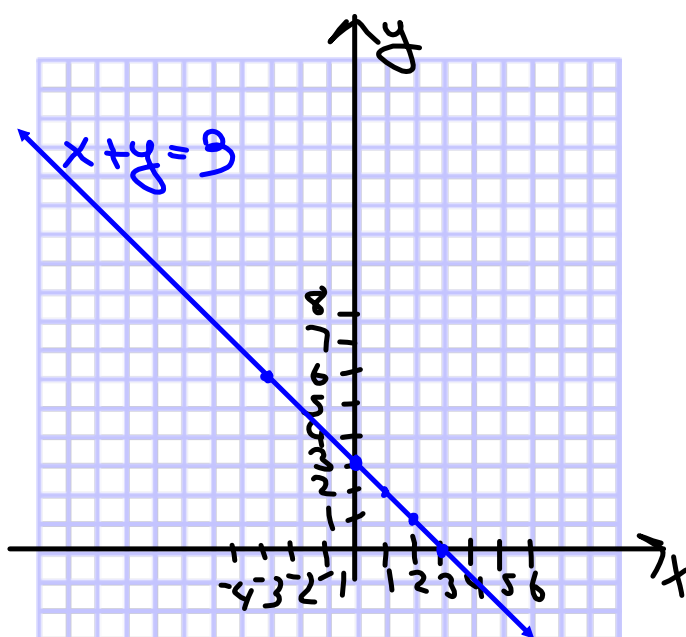
Let x be the number of two-pointers and y be the number of three-pointers that Emily scored. Write an equation to represent the situation.

$$2x + 3y = 32$$

Exploratory Challenge/Exercises

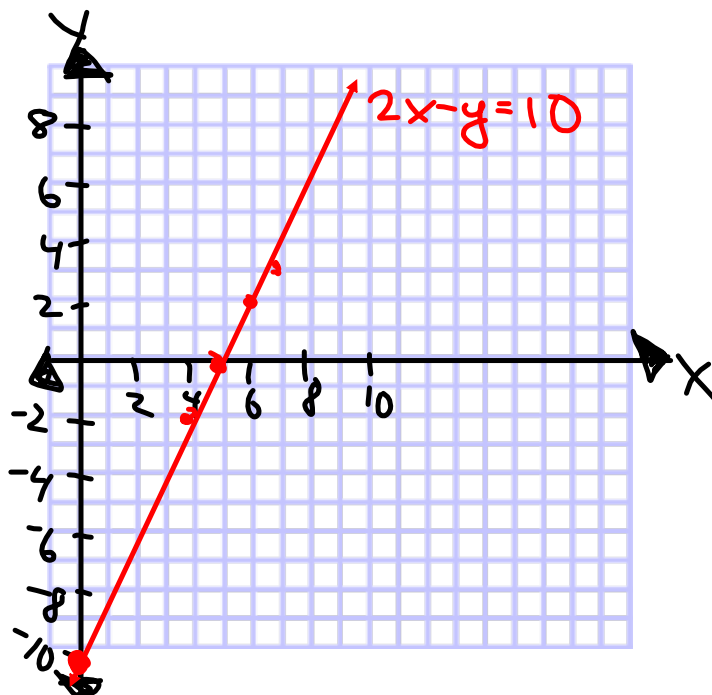
1. Find five solutions for the linear equation $x + y = 3$, and plot the solutions as points on a coordinate plane.

x	Linear Equation: $x + y = 3$	y
2	$2 + 1 = 3$	1
3	$3 + 0 = 3$	0
1	$1 + 2 = 3$	2
0	$0 + 3 = 3$	3
-3	$-3 + 6 = 3$	6



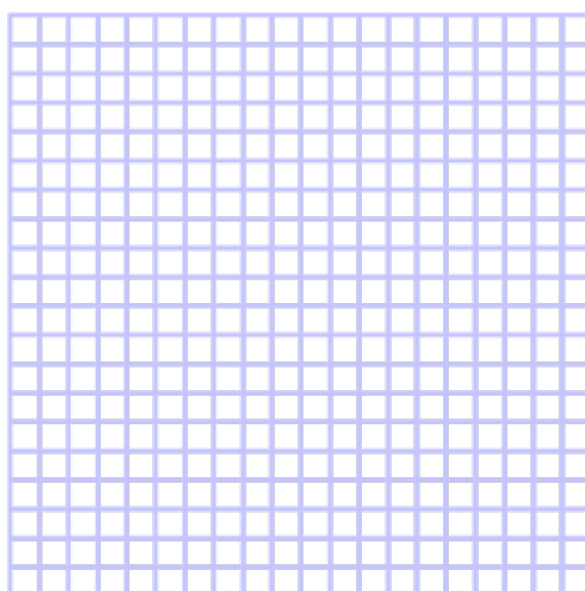
2. Find five solutions for the linear equation $2x - y = 10$, and plot the solutions as points on a coordinate plane.

x	Linear Equation: $2x - y = 10$	y
6	$2(\underline{6}) - \underline{2} = 10$	2
0	$2(0) - (-10) = 10$	-10
5	$2(5) - 0 = 10$	0
4	$2(4) - (-2) = 10$	-2
7	$2(7) - 4 =$	4



3. Find five solutions for the linear equation $x + 5y = 21$, and plot the solutions as points on a coordinate plane.

x	Linear Equation: $x + 5y = 21$	y



4. Consider the linear equation $\frac{2}{5}x + y = 11$.

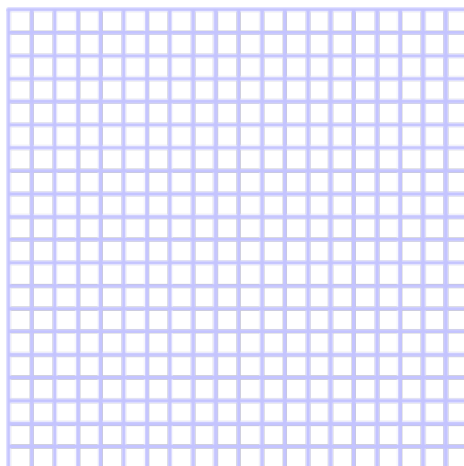
a. Will you choose to fix values for x or y ? Explain.

Yes, plug in multiples of 5 to make life easier

b. Are there specific numbers that would make your computational work easier? Explain.

c. Find five solutions to the linear equation $\frac{2}{5}x + y = 11$, and plot the solutions as points on a coordinate plane.

x	Linear Equation: $\frac{2}{5}x + y = 11$	y
0	$\frac{2}{5}(0) + 11 = 11$	11
5	$\frac{2}{5}(5) + 9 = 11$	9
10	$\frac{2}{5}(10) + 7 = 11$	7
15	$\frac{2}{5}(15) + 5 = 11$	5



5. At the store, you see that you can buy a bag of candy for \$2 and a drink for \$1. Assume you have a total of \$35 to spend. You are feeling generous and want to buy some snacks for you and your friends.
- Write an equation in standard form to represent the number of bags of candy, x , and the number of drinks, y , that you can buy with \$35.

- Find five solutions to the linear equation from part (a), and plot the solutions as points on a coordinate plane.

x	Linear Equation:	y

