

Each problem is worth 5 points. For full credit indicate clearly how you reached your answer.

1. Solve the system of equations:

$$\begin{array}{r} 3x + 2y = 6 \\ 2x - y = 11 \\ \hline +y +y \\ \hline 2x = 11 + y \\ -11 \quad -11 \end{array}$$

$$\underline{2x - 11 = y}$$

$$3x + 2(2x - 11) = 6$$

$$3x + 4x - 22 = 6$$

$$\begin{array}{r} 7x - 22 = 6 \\ +22 +22 \end{array}$$

$$7x = 28$$

$$\underline{x = 4}$$

First I added and took away from both sides till I got what y equaled (which was an equation at the time) Then I substituted the equation in for y, ~~and~~ distributed the two - added and subtracted till I got what x was. I plugged that value into the equation and got y.

$$\begin{array}{r} 3(4) + 2y = 6 \\ 12 + 2y = 6 \\ 2y = -6 \\ \underline{y = -3} \end{array}$$

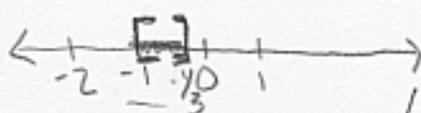
2. Solve the inequality $|3x + 2| \leq 1$, graph the solution on a number line, and write the solution in interval notation.

$$|3x + 2| \leq 1$$

$$-1 \leq 3x + 2 \leq 1$$

$$-3 \leq 3x \leq -1$$

$$-1 \leq x \leq -\frac{1}{3}$$



$$\underline{[-1, -\frac{1}{3}]}$$
 Nice!

After looking at the equation you need to do it that way and also with the negative of 1 and I solved it out like a regular equation and I found x to be greater than or equal to -1 and x to be less than or equal to -1/3. to graph this I use the [to put in -1 & -1/3 cause it is equal to or less than and for interval notation it is written as $[-1, -\frac{1}{3}]$