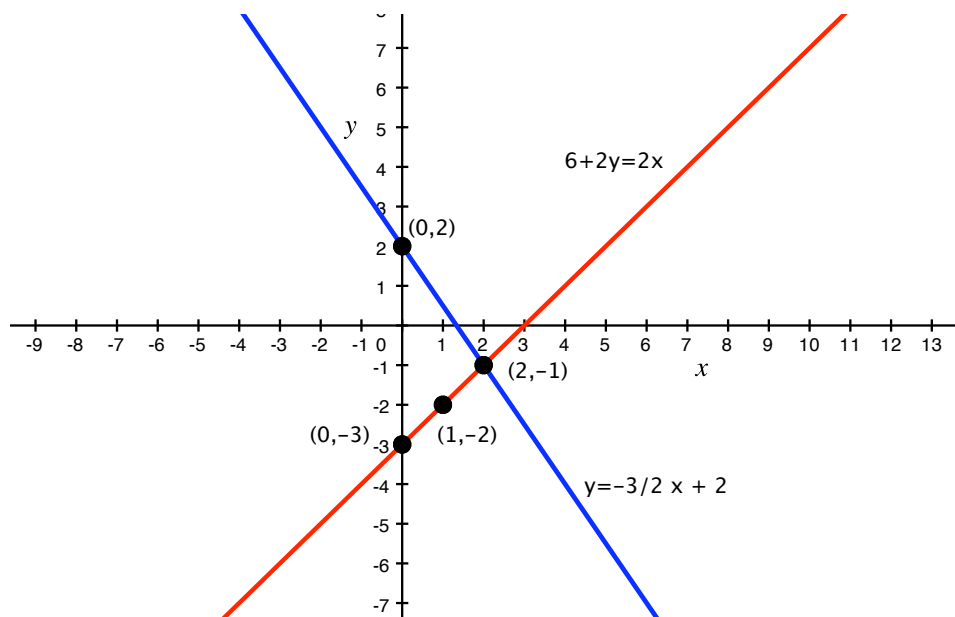


Math 80 Quiz #5 Answers

1. No (2,1) is not a solution because the point (2,1) is not the intersection of the two lines. (In order to satisfy both equations, it must be a point on both lines.)
2. To solve this by graphing, we must first graph both lines. The first equation $y = -\frac{3}{2}x + 2$ is already in slope-intercept form, so we can see that the associated line has slope $-\frac{3}{2}$ and y -intercept (0,2).

To graph the second line, you can find ordered pairs that satisfy the equation or you can write the equation in slope-intercept form by solving for y : $6 + 2y = 2x \Rightarrow 2y = 2x - 6 \Rightarrow y = x - 3$
So, this line has slope 1 and y -intercept (0 - 3).



3. Here are a couple ways to do this problem (There are more ways as well.):

- Solve for y in the first equation: $y = -2x + 5$
Substitute this in the 2nd equation: $x - 2(-2x + 5) = -15 \Rightarrow x = -1$

To find y , evaluate any equation with $x = -1$: $y = 7$

Solution: $(-1, 7)$

- Solve for x in the second equation: $x = 2y - 15$
Substitute this in the 1st equation: $2(2y - 15) + y = 5 \Rightarrow y = 7$

To find x , evaluate any equation with $y = 7$: $x = -1$

Solution: $(-1, 7)$

4. Here is one way to solve this (There are more ways as well.):

Multiplying both sides of the first equation by 4 (to clear fractions) yields $y = -4x + 4$.

This can be substituted into the 2nd equation: $12x + 3(-4x + 4) = 9 \Rightarrow 12x - 12x + 12 = 9$

$$\Rightarrow 12 = 9$$

This is false, which indicates that there is no solution to the system.