

5-1: Solving Systems by Graphing

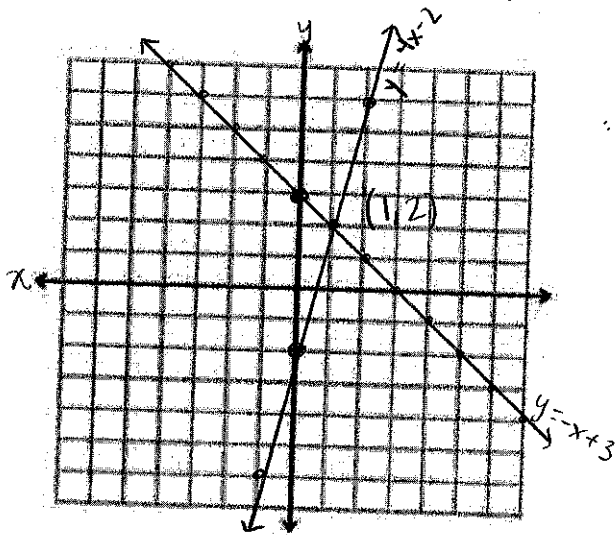
Name: Key  
Algebra 1

Date: \_\_\_\_\_  
Band: \_\_\_\_\_

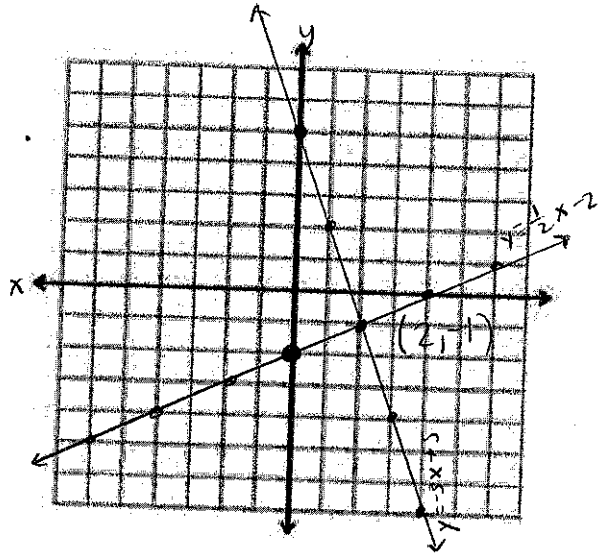
**LT#1: Solve systems of equations by graphing.**

**Solve each system by graphing. Check your solution.**

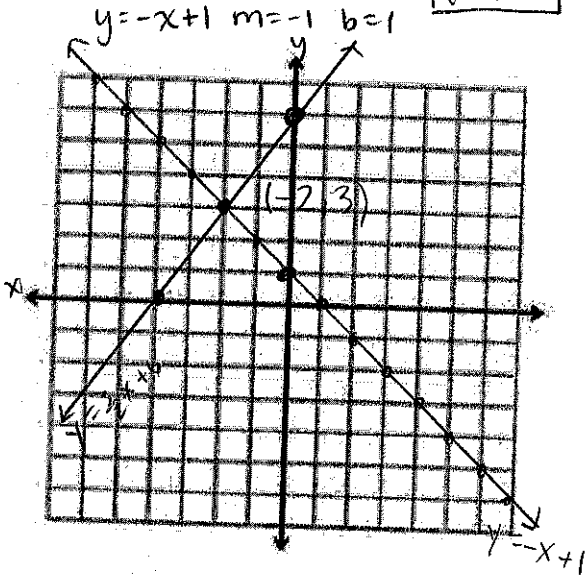
1.  $\begin{cases} y = -x + 3 & m = -1 & b = 3 \\ y = 4x - 2 & m = 4 & b = -2 \end{cases}$  (1, 2)



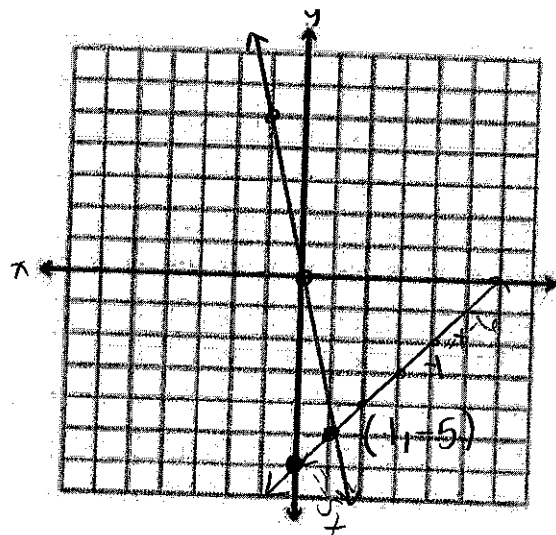
2.  $\begin{cases} y = \frac{1}{2}x - 2 & m = \frac{1}{2} & b = -2 \\ y = -3x + 5 & m = -3 & b = 5 \end{cases}$  (2, -1)



3.  $\begin{cases} y = \frac{3}{2}x + 6 & m = \frac{3}{2} & b = 6 \\ x + y = 1 & m = -1 & b = 1 \end{cases}$  (-2, 3)

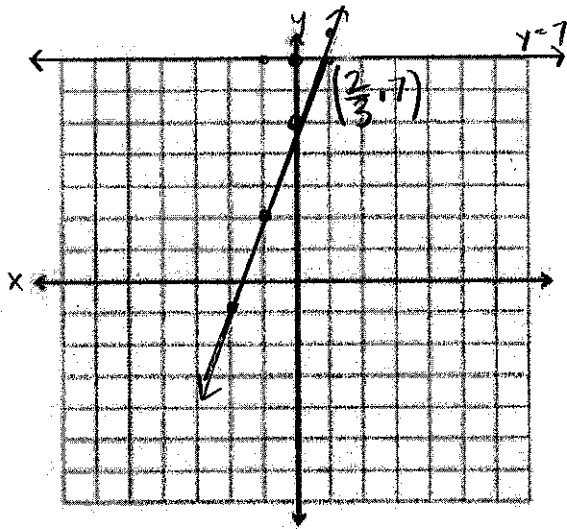


4.  $\begin{cases} y = -5x & m = -5 & b = 0 \\ y = x - 6 & m = 1 & b = -6 \end{cases}$  (1, -5)

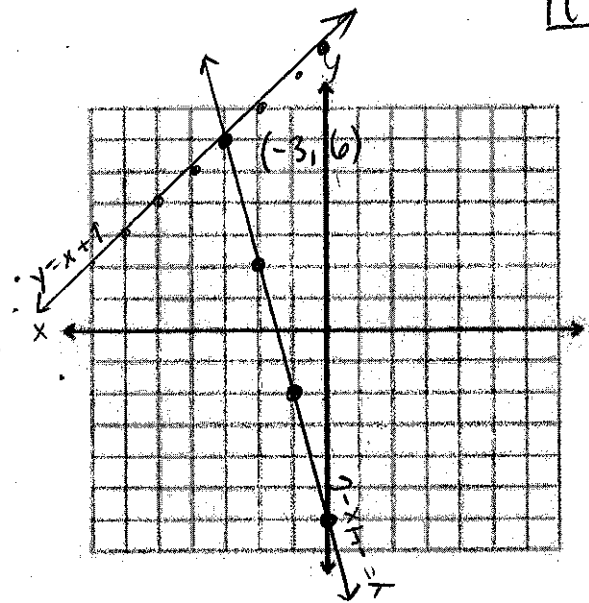


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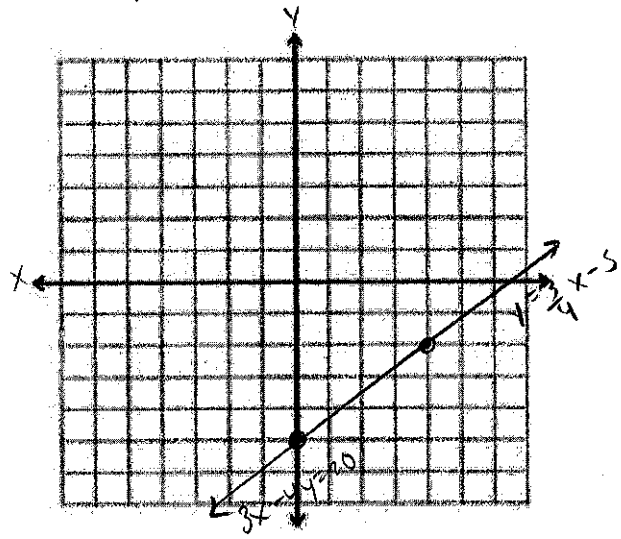
5. 
$$\begin{cases} y = 3x + 5 & m = 3 & b = 5 \\ -3x + y = 5 & m = 3 & b = 5 \\ y = 7 & m = 0 & b = 7 \end{cases}$$
  $\left(\frac{2}{3}, 7\right)$



6. 
$$\begin{cases} y = -4x - 6 & m = -4 & b = -6 \\ y = x + 9 & m = 1 & b = 9 \end{cases}$$
  $(-3, 6)$

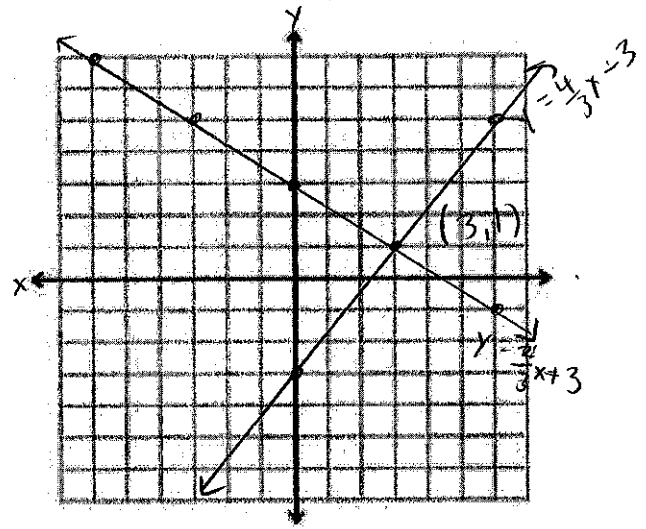


7. 
$$\begin{cases} y = \frac{3}{4}x - 5 & m = \frac{3}{4} & b = -5 \\ 3x - 4y = 20 \end{cases}$$
  
 $y = \frac{3}{4}x - 5$



infinitely many solutions

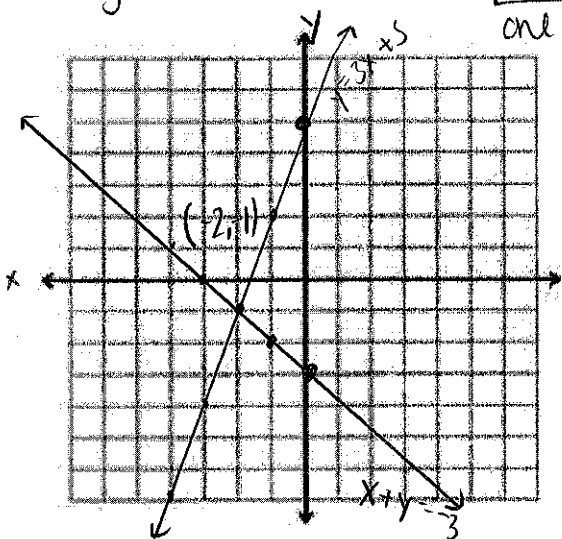
8. 
$$\begin{cases} y = \frac{4}{3}x - 3 & m = \frac{4}{3} & b = -3 \\ y = -\frac{2}{3}x + 3 & m = -\frac{2}{3} & b = 3 \end{cases}$$
  $(3, 1)$



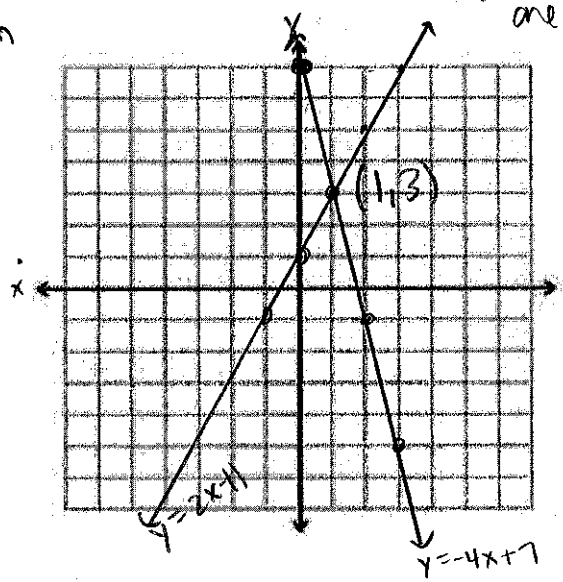
**LT#2: Analyze special systems.**

Solve each system by graphing. Tell whether the system has *one solution*, *infinitely many solutions*, or *no solution*.

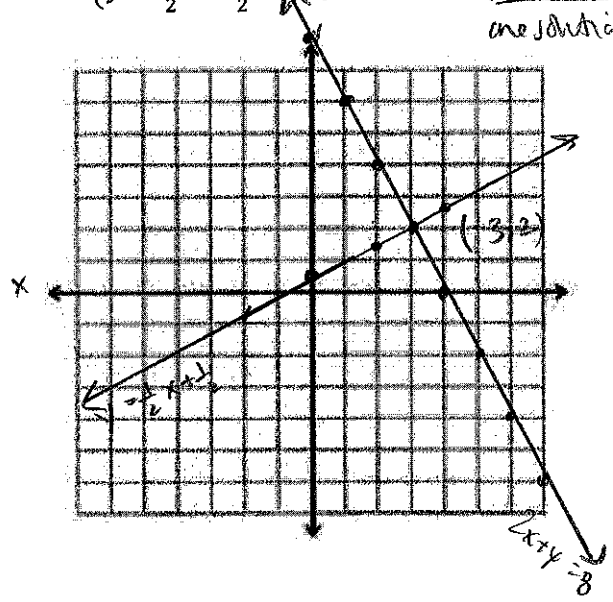
9.  $\begin{cases} y = 3x + 5 & m=3 & b=5 \\ x + y = -3 & m=-1 & b=-3 \end{cases}$   
 $y = -x - 3$   
 $(-2, -1)$   
 one solution



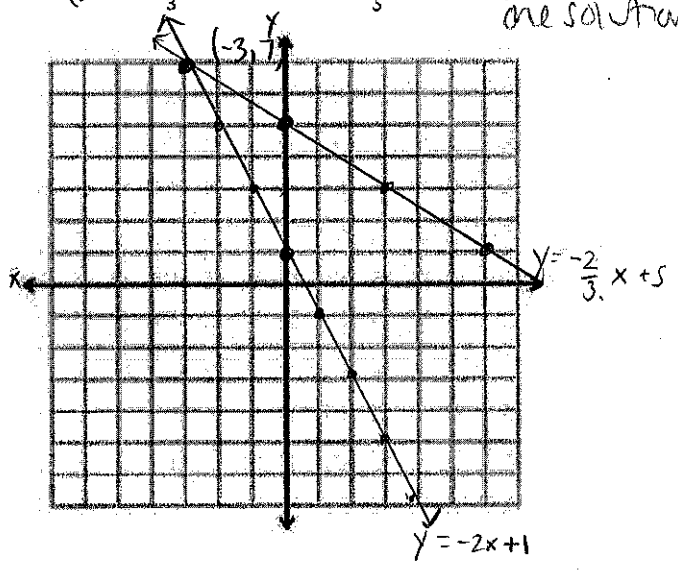
10.  $\begin{cases} y = 2x + 1 & m=2 & b=1 \\ y = -4x + 7 & m=-4 & b=7 \end{cases}$   
 $(1, 3)$   
 one solution



11.  $\begin{cases} y = -2x + 8 & m=-2 & b=8 \\ 2x + y = 8 & m=-2 & b=8 \end{cases}$   
 $y = \frac{1}{2}x + \frac{1}{2}$   
 $(3, 2)$   
 one solution

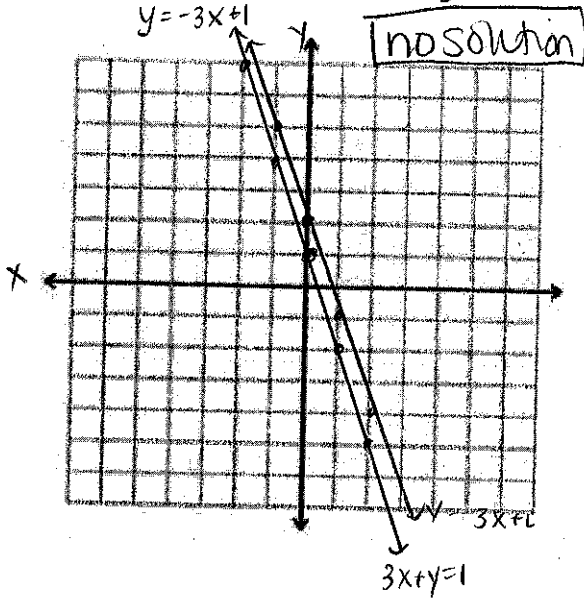


12.  $\begin{cases} y = -2x + 1 & m=-2 & b=1 \\ y = -\frac{2}{3}x + 5 & m=-\frac{2}{3} & b=5 \end{cases}$   
 $(-3, 7)$   
 one solution

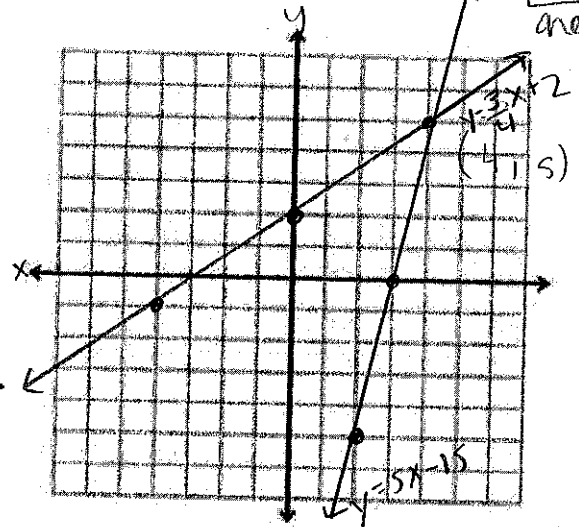


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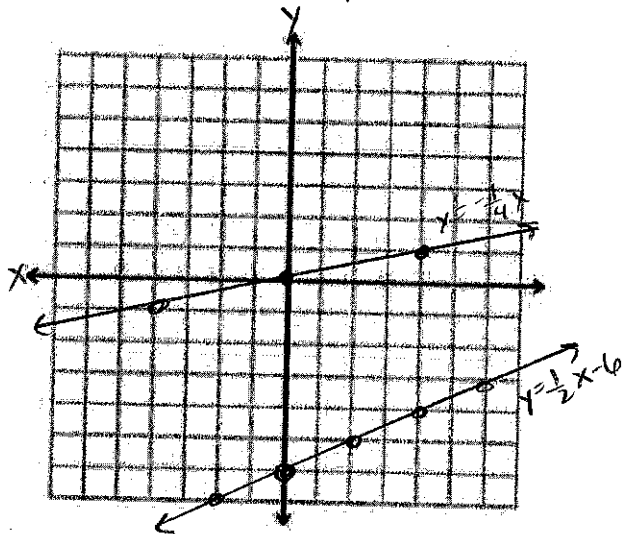
13.  $\begin{cases} y = -3x + 2 & m = -3 & b = 2 \\ 3x + y = 1 & m = -3 & b = 1 \end{cases}$



14.  $\begin{cases} y = 5x - 15 & m = 5 & b = -15 \\ y = \frac{3}{4}x + 2 & m = \frac{3}{4} & b = 2 \end{cases}$



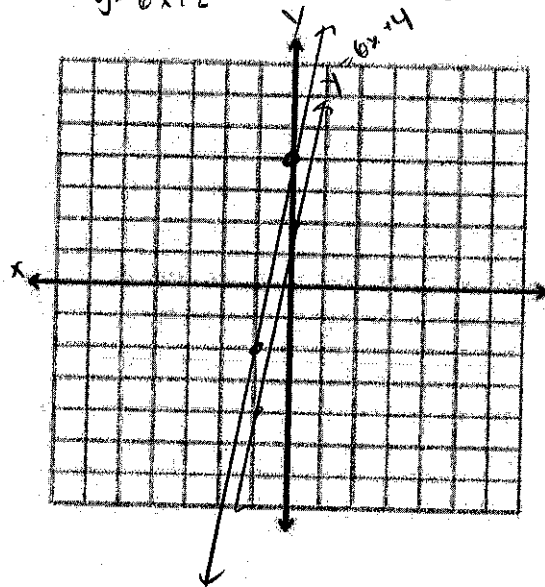
15.  $\begin{cases} y = \frac{1}{2}x - 6 & m = \frac{1}{2} & b = -6 \\ y = -\frac{1}{4}x & m = -\frac{1}{4} & b = 0 \end{cases}$   $(8, -2)$



one solution

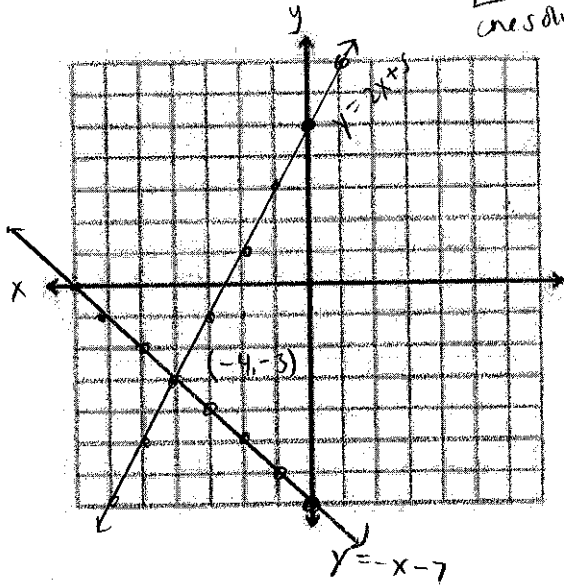
$$\begin{aligned} 4\left(\frac{1}{2}x - 6\right) &= -\frac{1}{4}x \quad y = -\frac{1}{4}(8) \\ 2x - 24 &= -x \quad y = -2 \\ -24 &= -3x \\ 8 &= x \end{aligned}$$

16.  $\begin{cases} y = 6x + 4 & m = 6 & b = 4 \\ -2 + y = 6x & m = 6 & b = 2 \end{cases}$  no solution

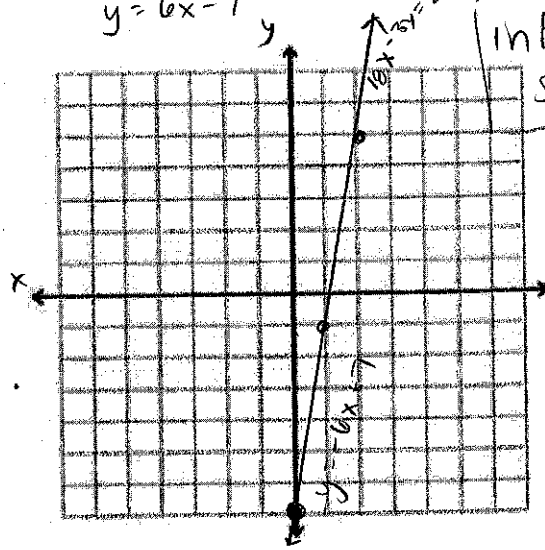


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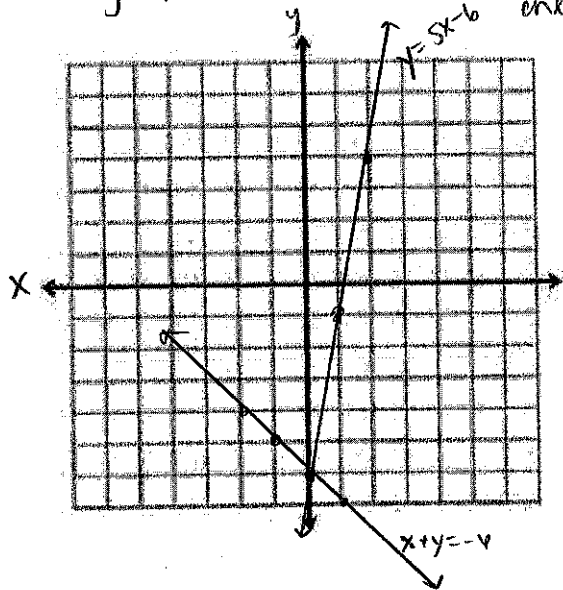
17.  $\begin{cases} y = -x - 7 & m = -1 & b = -7 \\ y = 2x + 5 & m = 2 & b = 5 \end{cases}$   $(-4, -3)$   
one solution



18.  $\begin{cases} y = 6x - 7 & m = 6 & b = -7 \\ 18x - 3y = 21 & m = 6 & b = -7 \\ -y = -6x + 7 & m = 6 & b = -7 \\ y = 6x - 7 \end{cases}$   $(-4, 3)$   
Infinite many solutions



19.  $\begin{cases} y = 5x - 6 & m = 5 & b = -6 \\ x + y = -6 & m = -1 & b = -6 \\ y = -x - 6 \end{cases}$   $(0, -6)$   
one solution



20.  $\begin{cases} y = -\frac{3}{2}x - 3 & m = -\frac{3}{2} & b = -3 \\ y = \frac{1}{4}x + 4 & m = \frac{1}{4} & b = 4 \end{cases}$   $(-4, 3)$   
one solution

