

Practice 4.1

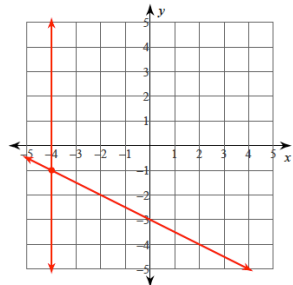
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Solve each system by graphing.

1)  $y = -\frac{1}{2}x - 3$

$x = -4$

$m = -\frac{1}{2}$   $b = -3$   
vertical line



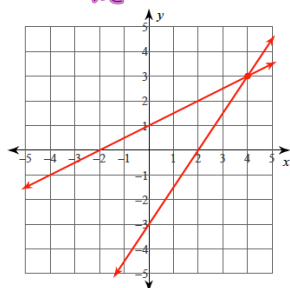
$(-4, -1)$

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

$y = \frac{1}{2}x + 1$

$m = \frac{3}{2}$   $b = -3$

$m = \frac{1}{2}$   $b = 1$

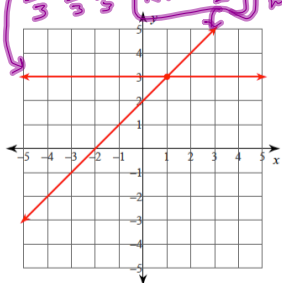


$(4, 3)$

3)  $-y = -3$

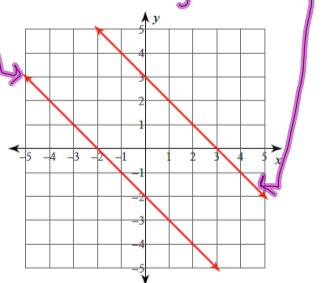
$3x + 6 = 3y$

$b = 3$  Horizontal Line  
 $x + 2 = y$   $m = \frac{1}{1}$   $b = 2$



$(1, 3)$

4)  $-x - 2 = y$  (add x to each side)  
 $-y + 3 = x$   $y = -x + 3$



No solution

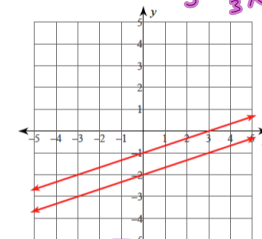
5) Is  $(-9, -1)$  a solution of the following linear system of equations?

$8x + 9y = -81$   
 $x - 3y = -12$

6) Is  $(9, 9)$  a solution of the following linear system of equations?

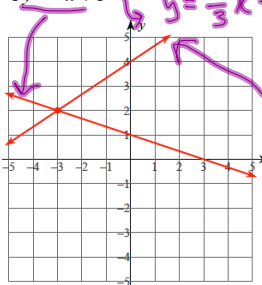
$17x - 9y = 72$   
 $x - 9y = -72$

7)  $x - 3y = 6$   $\rightarrow y = \frac{1}{3}x - 2$   
 $x - 3y = 3$   $\rightarrow y = \frac{1}{3}x - 1$



No solution

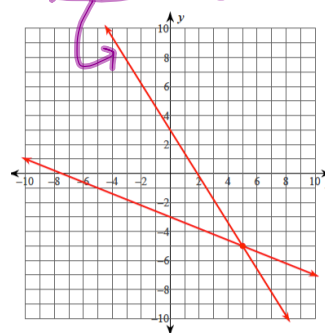
$-2x = -3y + 12$   $\rightarrow -2x + 12 = -3y$   
 $3y = -x + 3$   $\rightarrow y = \frac{1}{3}x + 1$



$(-3, 2)$

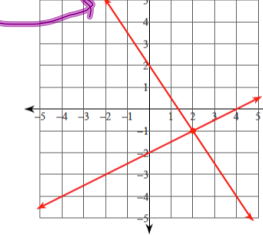
1)  $2x + 5y = -15$

$8x + 5y = 15$



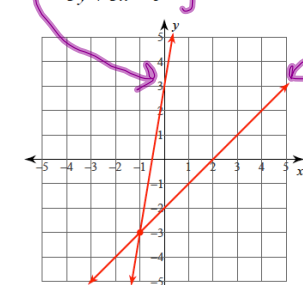
$(5, -5)$

8)  $3x + 2y = 4$   $\rightarrow 2y = -3x + 4$   $\rightarrow y = -\frac{3}{2}x + 2$   
 $x - 2y = 4$   $\rightarrow -2y = -x + 4$   $\rightarrow y = \frac{1}{2}x - 2$



$(2, -1)$

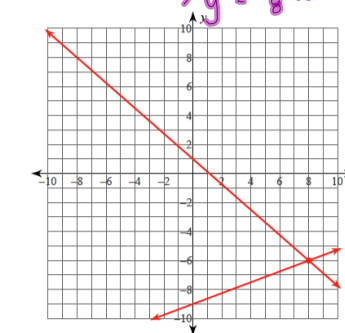
10)  $6x = y - 3$   $\rightarrow y = 6x + 3$   
 $-3y + 3x = 6$   $\rightarrow y = x - 2$



$(-1, -3)$

12)  $3x - 8y = 72$

$7x + 8y = 8$



$(8, -6)$

13.  $(-67, -46)$  14. Infinitely Many Solutions (Identity)  
15.  $(10, -21)$  16.  $(-0.75, 0.5)$