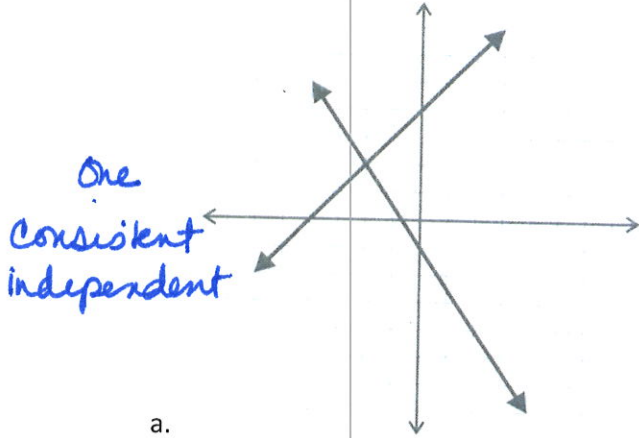
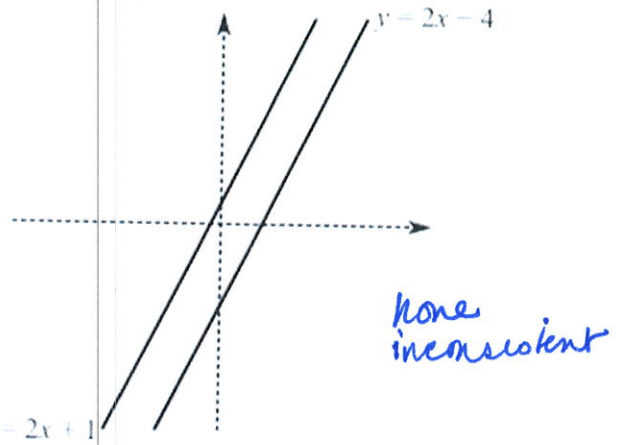


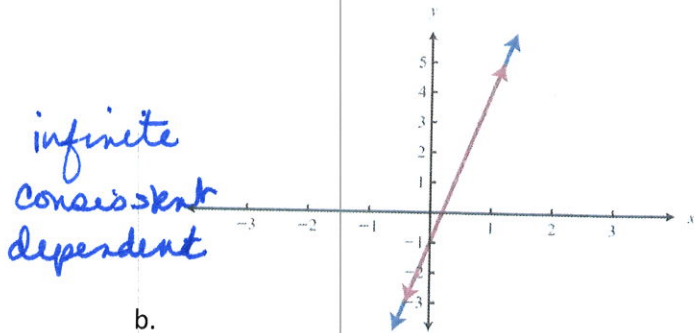
1. Find the number of solutions to the system of equations shown.



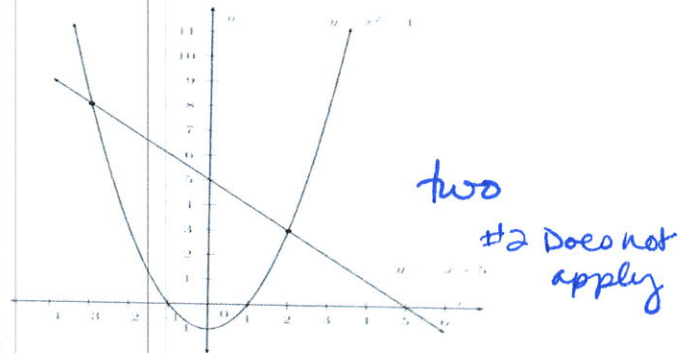
a.



c.  $y = 2x + 1$



b.



d.

2. For the three linear graphs above, label each one consistent or inconsistent. For the consistent graphs, label each one dependent or independent.

3. Is the ordered pair a solution to the system?

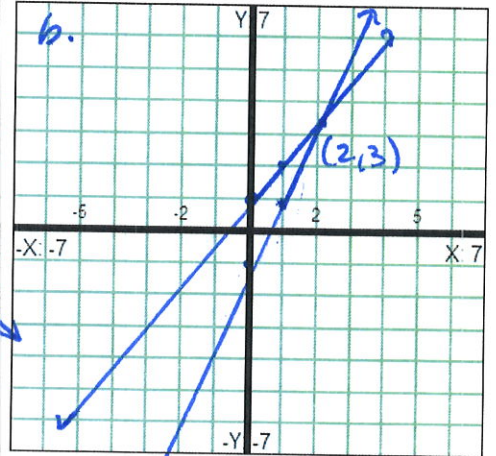
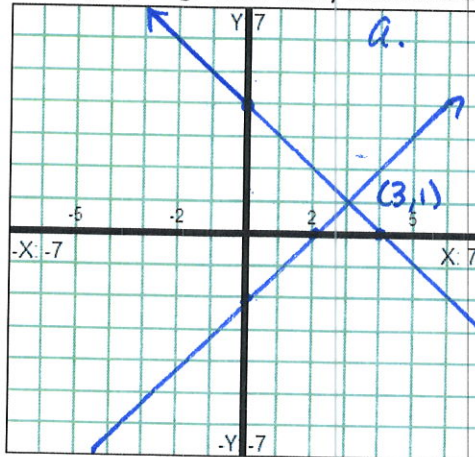
a.  $\begin{cases} x + y = 8 \\ 3x + 2y = 21 \end{cases}$  i) (2,4), ii) (5,3)  
 $2+4=8$  no       $5+3=8$  yes  
 $5+3=8$  ok       $3(5)+2(3)=15+6=21$  both check

b.  $\begin{cases} 2y = 4x + 6 \\ 2x - y = -3 \end{cases}$  i) (-3, -3), ii) (0,3)  
 $2(-3) = 4(-3) + 6$        $-6 = -12 + 6$  ok      yes       $2(-3) - (-3) = -6 + 3 = -3$  ok  
 $2(3) = 4(0) + 6$  ok       $2(0) - 3 = -3$  ok

c.  $\begin{cases} -2 = x - 7y \\ 6x - y = 13 \end{cases}$  i) (-2,0), ii)  $(\frac{1}{2}, \frac{5}{14})$   
 $-2 = -2 - 7(0)$  ok       $6(-2) - 0 = -12 \neq 13$  no  
 $-2 = \frac{1}{2} - 7(\frac{5}{14}) = \frac{1}{2} - \frac{5}{2} = -2$  ok       $6(\frac{1}{2}) - \frac{5}{14} = 3 - \frac{5}{14} \neq 13$  no

4. Solve each linear system by graphing. How many solutions are there?

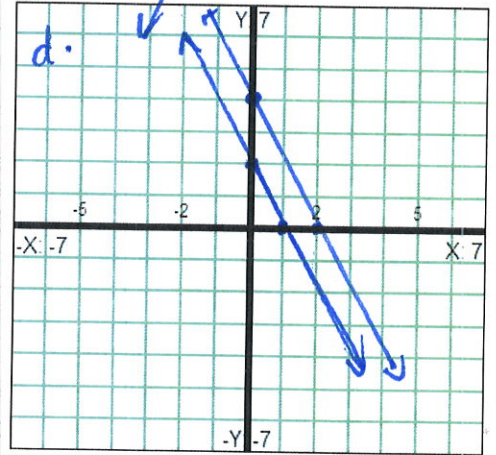
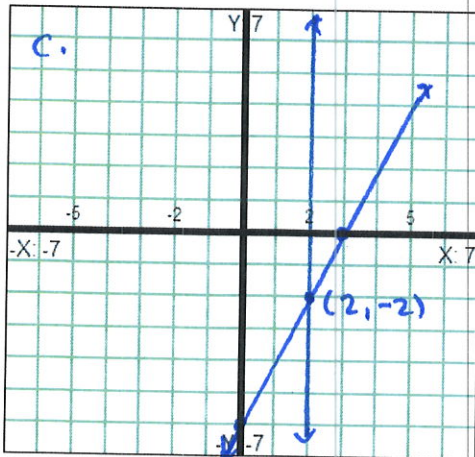
a.  $\begin{cases} x + y = 4 \\ x - y = 2 \end{cases}$   
*one sol.*



$x+1=2x-1$   
 $2=x$   
 $y=3$

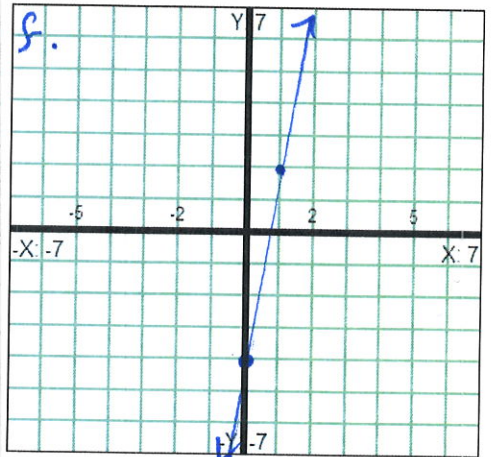
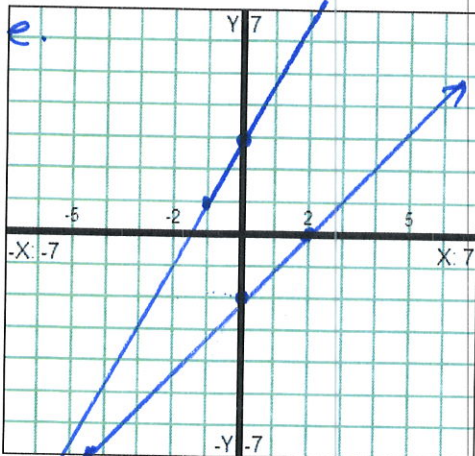
b.  $\begin{cases} y = x + 1 \\ y = 2x - 1 \end{cases}$   
*one solution*

c.  $\begin{cases} 2x - y = 6 \\ y = 2 \end{cases}$   
*one sol.*



d.  $\begin{cases} 2x + y = 4 \\ 6x = -3y + 6 \end{cases}$   
*no solution*

e.  $\begin{cases} y = x - 2 \\ y = 2x + 3 \end{cases}$   
*one solution*



f.  $\begin{cases} 6x - y = 4 \\ \frac{1}{2}y = -2 + 3x \end{cases}$   
 $y = -4 + 6x$

*infinite*

5. Draw a sketch of:

a. A system of 2 linear equations with a solution at  $(-1, 4)$ .

b. A system of 2 linear equations with no solution.

