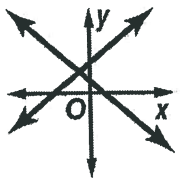
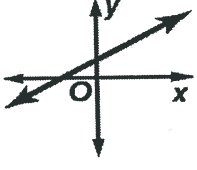
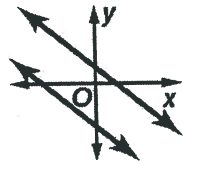


6-1 Graphing Systems of Equations

Possible Number of Solutions Two or more linear equations involving the same variables form a system of equations. A solution of the system of equations is an ordered pair of numbers that satisfies both equations. The table below summarizes information about systems of linear equations.

Graph of a System	intersecting lines	same line	parallel lines
			
Number of Solutions	exactly one solution	infinitely many solutions	no solution

Exercises

Graph each system and determine the number of solutions it has. If it has one solution, name it.

1. $y = -2$ *one (-1, -2)*
 $3x - y = -1$

2. $x = 2$ *one (2, -3)*
 $2x + y = 1$

3. $y = \frac{1}{2}x$ *one (2, 1)*
 $x + y = 3$

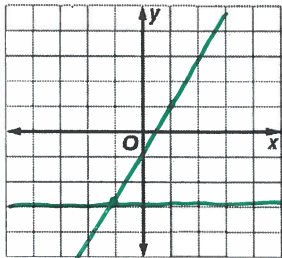
4. $2x + y = 6$
 $2x - y = -2$ *one (1, 4)*

5. $3x + 2y = 6$
 $3x + 2y = -4$ *No Solution*

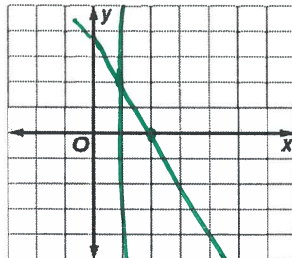
6. $2y = -4x + 4$ *Inf. Solution*
 $y = -2x + 2$

Graph each system and determine the number of solutions that it has. If it has one solution, name it.

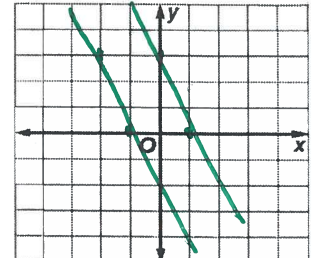
5. $2x - y = 1$ *one (-1, -2)*
 $y = -3$



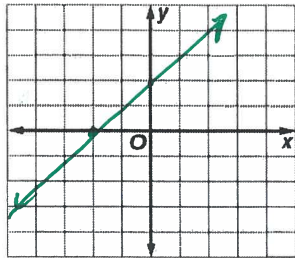
6. $x = 1$ *one (1, 2)*
 $2x + y = 4$



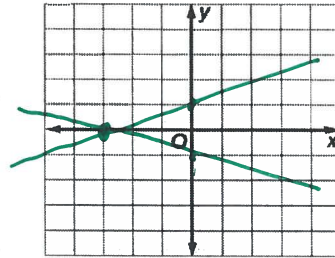
7. $3x + y = -3$ *No Solution*
 $3x + y = 3$



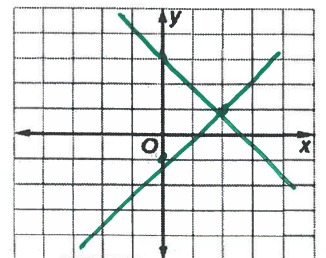
8. $y = x + 2$ *Inf. Solutions*
 $x - y = -2$



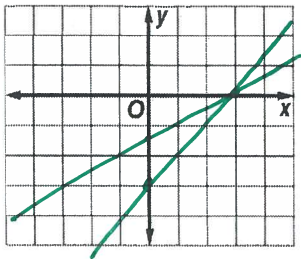
9. $x + 3y = -3$ *one (-3, 0)*
 $x - 3y = -3$



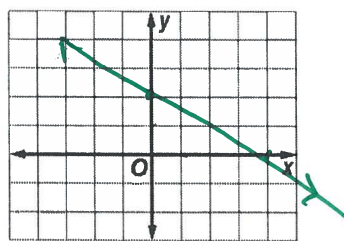
10. $y - x = -1$ *one (2, 1)*
 $x + y = 3$



11. $x - y = 3$ *one (3, 0)*
 $x - 2y = 3$



12. $x + 2y = 4$ *Inf. Solutions*
 $y = -\frac{1}{2}x + 2$



13. $y = 2x + 3$ *No Solution*
 $3y = 6x - 6$

