Special Systems

Graphing Systems of Equations

Use the graphs below to determine whether each system has <u>*one*</u> *solution,* <u>*no*</u> *solution, or* <u>*infinitely many*</u> *solutions. If the system has one solution, name it.*
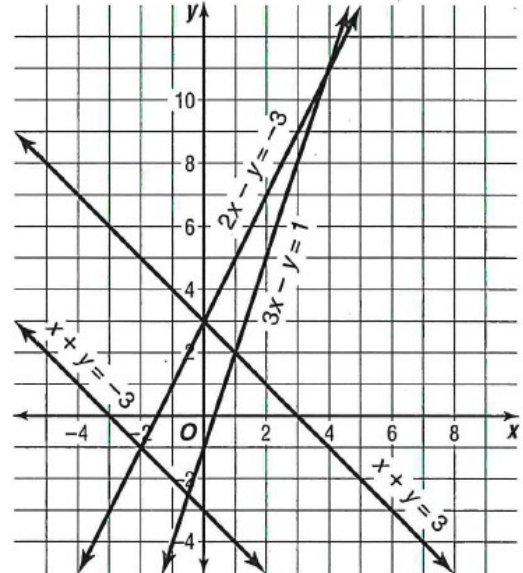
1. $x + y = -3$
$2x - y = -3$

2. $4x - 2y = -6$
$2x - y = -3$

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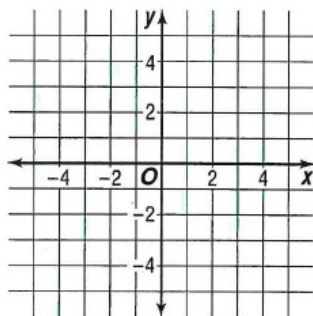$x + y = 3$

4. $x + y = -3$
$x + y = 3$

5. $x + y = 3$
$2x - y = -3$

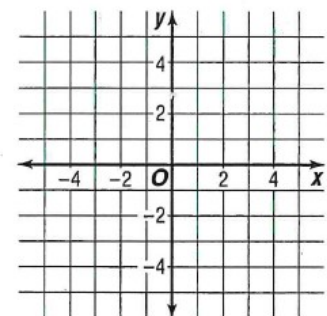**6.** $2x - y = -3$
$3x - y = 1$

Graph each system of equations. Then determine whether the system has <u>*one*</u> *solution,* <u>*no*</u> *solution, or* <u>*infinitely many*</u> *solutions. If the system has one solution, name it.*
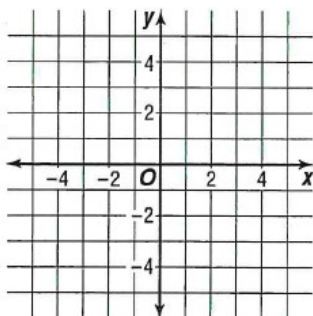
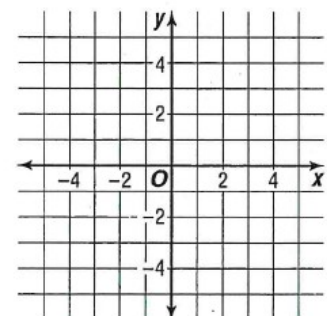**7.** $x - y = 3$
$x - 2y = 3$

8. $3x - y = -4$
$3x - y = 0$

9. $y = 2x - 3$
$4x = 2y + 6$

10. $x + 2y = 3$
$3x - y = -5$

Use the substitution method or linear combinations to solve the linear system and tell how many solutions the system has.

7. $x + y = -1$
$x + y = 8$

8. $x - 3y = 2$
$-2x + 6y = 2$

9. $3x - 2y = 0$
$3x - 2y = -4$

10. $6x + 4y = 14$
$3x + 2y = 2$

11. $3x - 2y = 3$
$-6x + 4y = -6$

12. $-2x + 4y = -2$
$-x - 2y = 3$