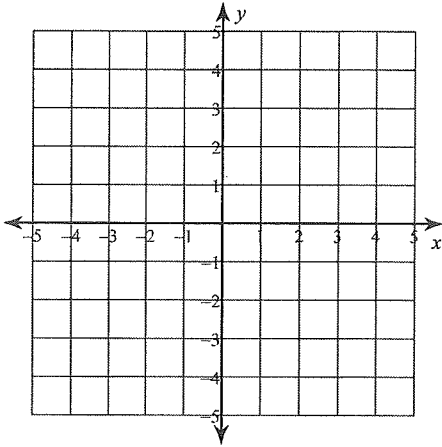


## Solving Systems of Equations by Graphing

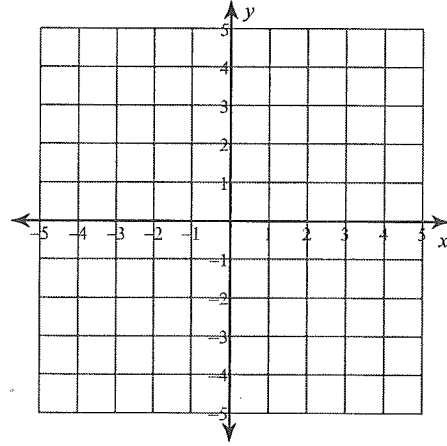
Solve each system by graphing.

1)  $y = -\frac{5}{3}x + 3$

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

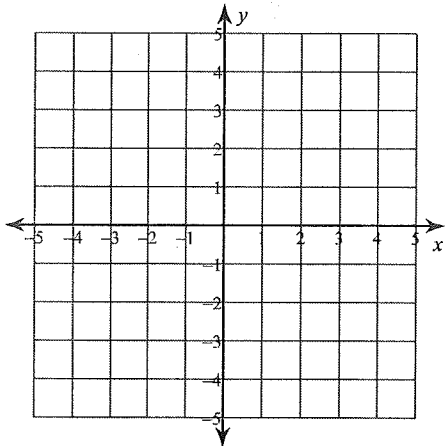


2)  $y = 4x + 3$   
 $y = -x - 2$

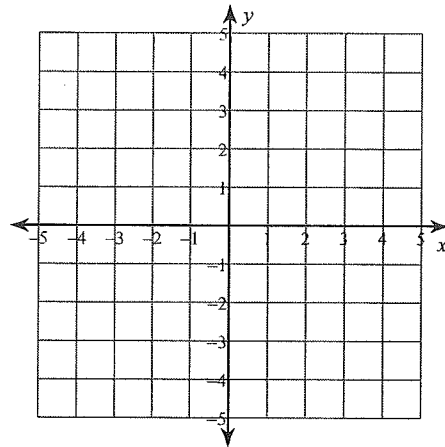


3)  $y = -\frac{1}{2}x - 1$

$y = \frac{1}{4}x - 4$

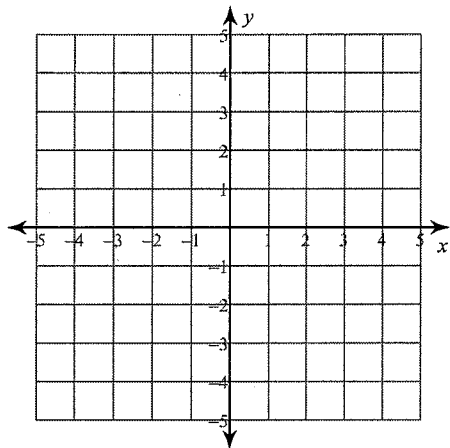


4)  $y = -1$   
 $y = -\frac{5}{2}x + 4$



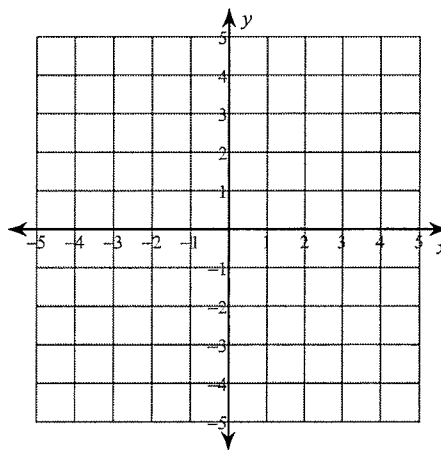
5)  $y = 3x - 4$

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



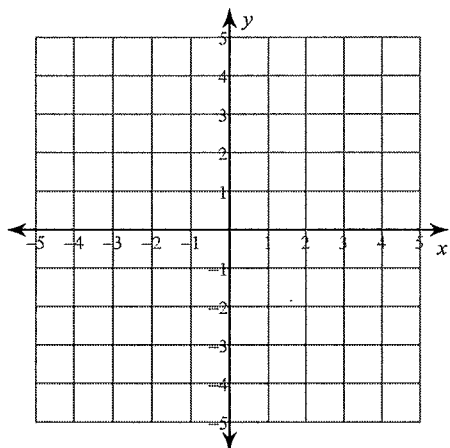
6)  $y = -2x + 2$

$y = -2x - 2$



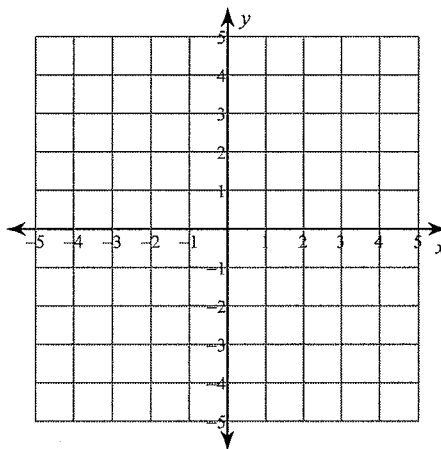
7)  $y = -\frac{1}{2}x - 2$

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



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

$y = -x + 1$



Name: \_\_\_\_\_

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

Class: \_\_\_\_\_

**\* SHOW ALL WORK ON  
\* SEPARATE PAPER! \***

## Solving Systems of Equations Algebraically Worksheet

Solve each system of equations by the substitution method.

1.  $y = 3x$   
 $x + 2y = -21$

3.  $x - 2y = 5$   
 $3x - 5y = 8$

2.  $2x + 2y = 4$   
 $x - 2y = 0$

4.  $3x + 4y = -7$   
 $2x + y = -3$

Solve each system of equations by the elimination method.

5.  $4x + y = 9$   
 $3x - 2y = 4$

7.  $4x - 3y = -4$   
 $3x - 2y = -4$

6.  $2x + y = 0$   
 $5x + 3y = 1$

Solve each system of equations. (Use either method).

8.  $3x + 2y = 40$   
 $x - 7y = -2$

10.  $\frac{2x + y}{3} = 15$

9.  $x + y = 6$   
 $x - y = 4.5$

$\frac{3x - y}{5} = 1$

Write a system of equations and then solve each problem.

11. The sum of two numbers is 42. Their difference is 12. What are the two numbers?

12. The sum of Kate's age and her mother's age is 52. Kate's mother is 20 years older than Kate. How old is each?

13. The perimeter of a rectangle is 86 cm. Twice the width exceeds the length by 2 cm. Find the dimensions of the rectangle.

14. The hypotenuse of a right triangle measures 75 m. The length of one leg is four times one-third the other leg. What are the lengths of the legs? (Pythagorean Theorem:  $a^2 + b^2 = c^2$ ).

