

Algebra I

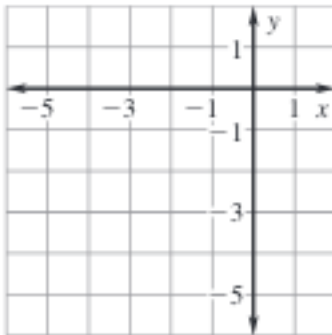
Review Chapter 6

Name _____

Solve the linear system by graphing.

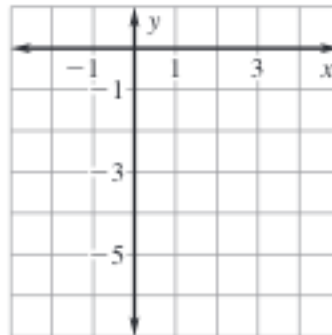
1. $3x + 5y = -18$

$4x + 2y = -10$



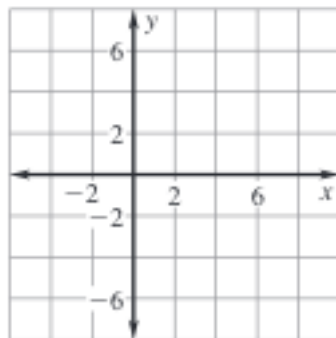
2. $2x - y = 6$

$4x - 2y = 8$



3. $3x + 4y = 24$

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



Solve the linear system using substitution.

4. $3x - 2y = 6$

$4y = -8$

5. $4x + 3y = 11$

$3x - y = 5$

6. $4x + 5y = 18$

$3x - 9y = -12$

7. $x + 6y = -17$

$0.4x + 0.5y = -1.1$

8. $x - \frac{1}{2}y = 1$

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

9. $4x + \frac{1}{3}y = \frac{8}{3}$

$\frac{1}{2}x + \frac{3}{4}y = -\frac{5}{2}$

- 10.** A restaurant owner wants to add imitation maple syrup that costs \$4.00 per liter to 50 liters of pure maple syrup that costs \$9.50 per liter. How many liters of imitation maple syrup should be added to make a mixture that costs \$5.00 per liter?

Solve the linear system using elimination.

11. $3x - 6y = 6$
 $9x - 3y = 8$

12. $4x + 3y = 4$
 $8x + 6y = 8$

13. $3x - 4y = 8$
 $5x + 3y = -6$

14. $5y + 2x = 5x + 1$ **15.** $5x - 2y = 8x - 1$ **16.** $\frac{2}{5}x - \frac{1}{3}y = 1$
 $3x - 2y = 3 + 3y$ $2x + 7y = 4y + 9$ $\frac{3}{5}x + \frac{2}{3}y = 5$

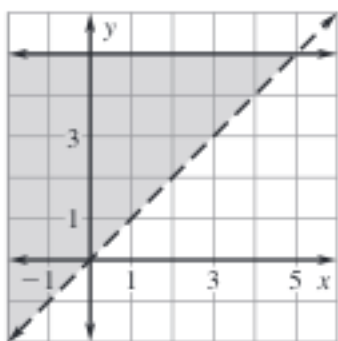
- 17.** Flying with the wind, a pilot travels 600 miles between two cities in four hours. The return trip into the wind takes five hours. The speed of the wind remains constant during the trip. Find the average speed of the plane with no wind and the speed of the wind.

Without solving the linear system, tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*.

18. $12x - 16y = 8$ 19. $0.4x + 0.5y = 0.2$ 20. $0.2x - 0.6y = 0.6$
 $3x - 4y = 2$ $0.3x - 0.1y = 1.1$ $0.4x - 1.2y = 2.4$

Write a system of linear inequalities for the shaded region.

21.



22.

