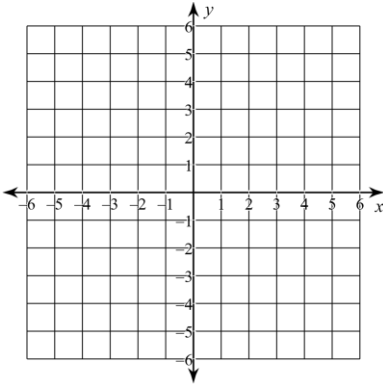


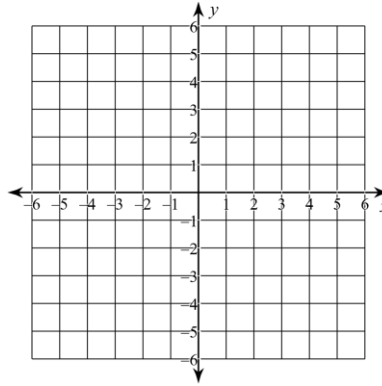
**2.REV.5 – Systems of Equations Review**

Solve the system of linear equations graphically. Write your solution as an ordered pair  $(x, y)$ . If the system has no solution or infinitely many solutions, then so state.

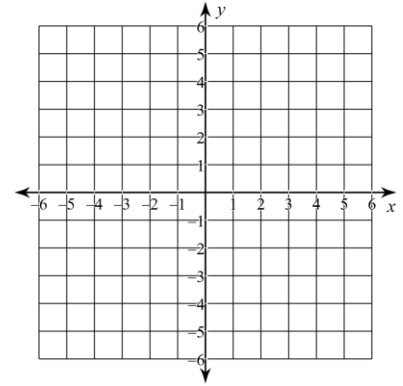
1.  $y = x - 2$   
 $y = -\frac{1}{3}x + 2$



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



3.  $x + 2y = 10$   
 $x - 6y = -6$



Solve the system of linear equations algebraically. Write your solution as an ordered pair  $(x, y)$ . If the system has no solution or infinitely many solutions, then so state.

4.  $x + 3y = 8$   
 $y = 2x - 9$

5.  $2x + 5y = -4$   
 $3x - y = 11$

6.  $3x - 2y = -5$   
 $4x + y = 8$

7.  $3x - 4y = 11$   
 $2x + 3y = -4$

8.  $2x - 3y = 24$   
 $-x + 12y = -33$

9.  $-9x - 3y = -7$   
 $18x + 6y = -6$

Write and solve the system of equations described.

10. A rock-climbing gym called Rock-and-Roll charges \$2.75 to rent shoes and \$3 per hour to climb. A competing gym, Climb the Walls, charges \$4.25 to rent shoes, and \$2.50 per hour to climb.

Let  $x$  = the number of hours and  $y$  = the total cost.

For how many hours is the cost the same? What is the cost?

11. Noah is given two beakers of saline solution in chemistry class. One contains a 3% saline solution and the other an 8% saline solution. Noah needs to mix these to create 150 mL of a 5% solution.

Let  $x$  = the amount of 3% solution and  $y$  = the amount of 8% solution.

How much of the 8% saline solution did Noah use?

12. Matthew stopped for gasoline twice on a long car trip. The price of gasoline at the first station was \$3.40 per gallon. At the second station, the price was \$3.50 per gallon. Matthew bought a total of 36.1 gallons of gasoline and spent a total of \$124.50.

Let  $x$  = the number of gallons bought at the first station and  $y$  = the amount bought at the second station.

How much gas did Matt purchase at the first gas station?

13. Sylvia wants to mix 100 pounds of Breakfast Blend coffee that will sell for \$25 per pound. She is using two types of coffee to create the mixture. Kona Coffee sells for \$51 per pound and Columbian Coffee sells for \$11 per pound.

Let  $x$  = the pounds of Kona Coffee and  $y$  = the pounds of Columbian Coffee.

How many pounds of each coffee should Sylvia use?

14. Alyssa invested a total of \$1500 in two accounts. One account paid 2% annual interest, and the other account paid 4% annual interest. After one year, Alyssa earned a total of \$44 interest.

Let  $x$  = the amount invested at 2% and  $y$  = the amount at 4%.

How much did Alyssa invest in the account paying 4% interest?