Chapter 6 Review

Directions: Complete the following sets of problems.

Find the solution of ordered pairs for the following systems.

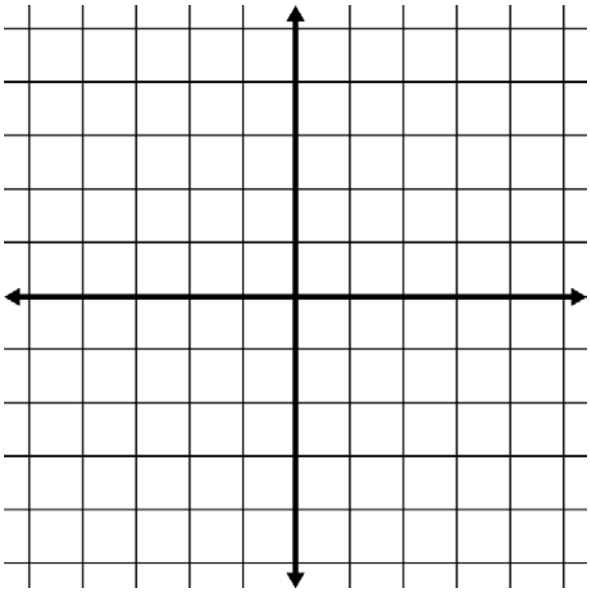
1. y = -1/2x – 2 and 2x – y = 4

2. 3x – y = 2 and –y = 4x + 2 =

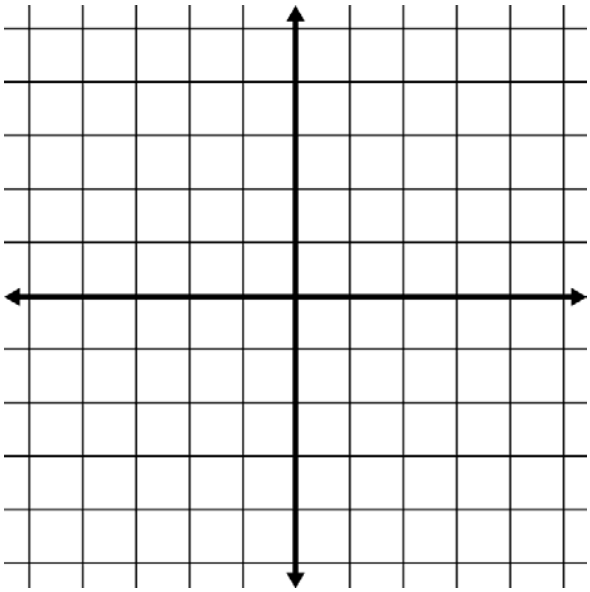
3. 1/3x – y = 1 and 1/4x – y = 1

Solve each system by graphing. Determine if the system is consistent or inconsistent.

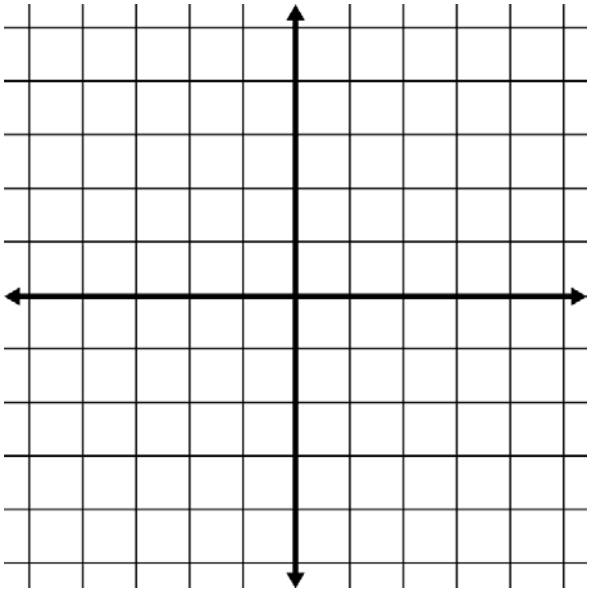
4. 2x + 3y = 3 and 4x + 6y = -12



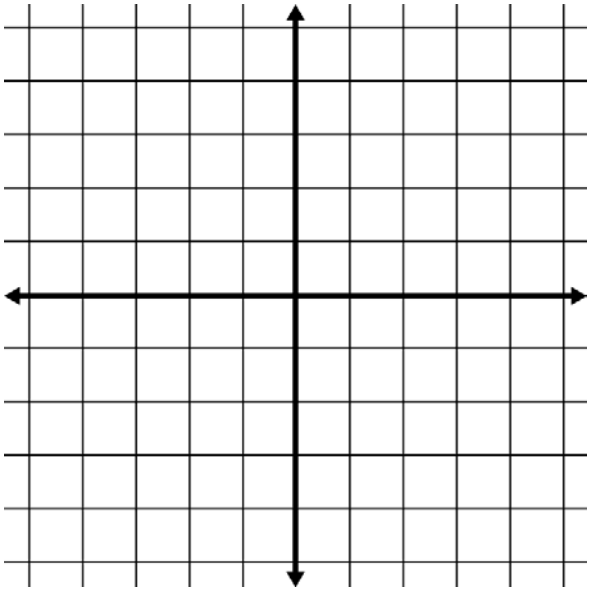
5. $3x - 2y = -1$ and $2x - 4y = 2$



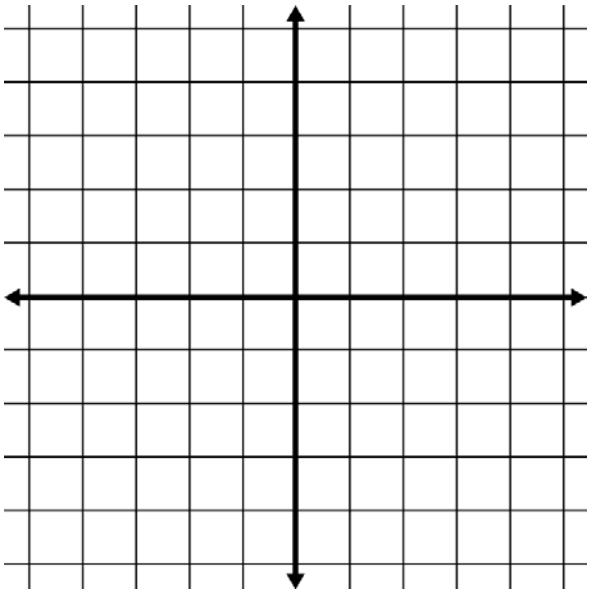
6. $y = -1$ and $x = -2$



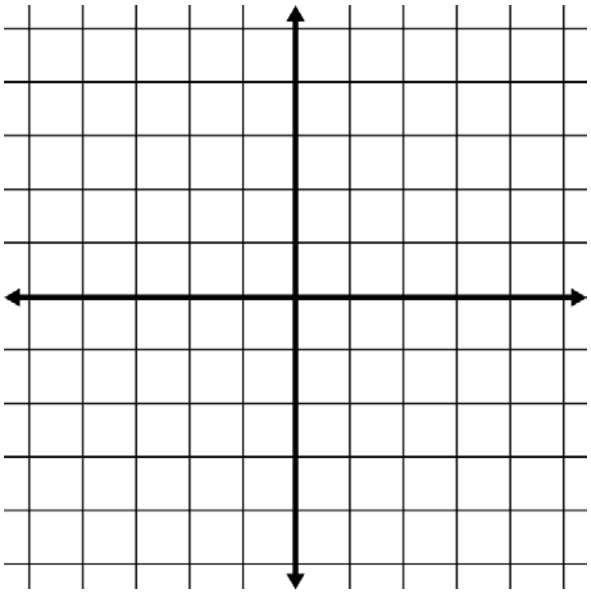
7. $x - y = 1$ and $y = 2$



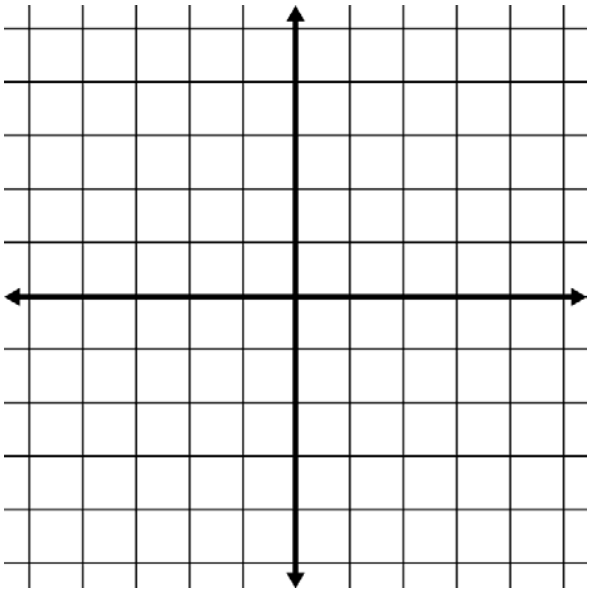
8. $3x + 3y = 21$ and $3x + 4y = 24$



9. $3x + 2y = 5$ and $9x + 6y = 12$



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



Use the substitution method to solve for the system of equations. If the solution is dependent or inconsistent, then identify them as such.

11. .25x + 75y = 4 and x – y = 4

12. .5x + .5y = 5 and y = x + 2.5

13. x + y = 2 and 1/5x – 1/3y = 2

14. 2x – 3y = -3 and 2/3x – y = -1

Solve each system using the addition or addition-multiplication method where necessary. Check your solutions to see if they satisfy the equations.

15. 2y = 41 – 5x and y = 17 – 2x

16. -4x + 7y = 9 and 2y = -5x -22

17. 3x + 2y = -3 and 2x + 3y = -2

18. 3x + 4y = 0 and x + 4y = -2

19. 1/3 x + ½ y = 6 and 2x – y = 4

Solve the system for each variable, and check your solutions.

20. x + 3y and z = 4x and x + y + z = 8

21. x + y + z = 60 and x – z = y + 6 and y = 40 – x – 3z

22. 2x + y + 4z = 3 and x + 2y = 2z -3 and 4z + 3y = 0

23. x + y + z = 1 and 2x – y + 3z = 4.5 and 4x -5y – 5z = -0.5

Write a system of two equations for the following problem and solve.

24. A metal alloy that is made up of 15% aluminum is combined with a metal alloy that is 35% aluminum. If the result is 400 Kilograms of 27.5% of aluminum alloy, then how much of each alloy was used?

Write a system with three equations for the following problem and solve.

25. If the digits of a three-digit number are reversed in order, then the sum of the new resulting number and the original number comes out to be 665. The difference of the two numbers is 297. The tens' digit place is two times the hundreds' place digit. What is the number?