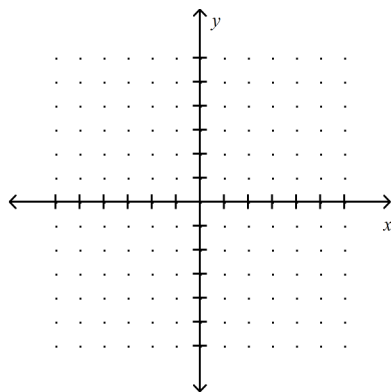


**Algebra IB: Chapter 6 Review****Short Answer**

1. Solve the system by graphing. State the solution.

$$y = 4x + 1$$

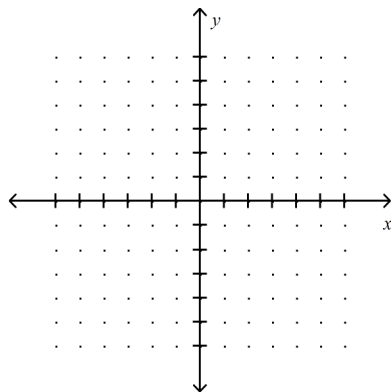
$$y = x - 2$$



2. Solve the system by graphing. State the solution.

$$2x - 3y = 12$$

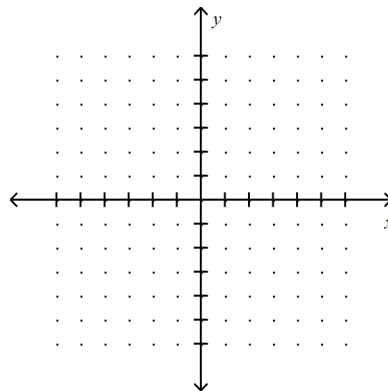
$$2x + y = 4$$



3. Solve the system by graphing. State the solution.

$$x + 3y = -6$$

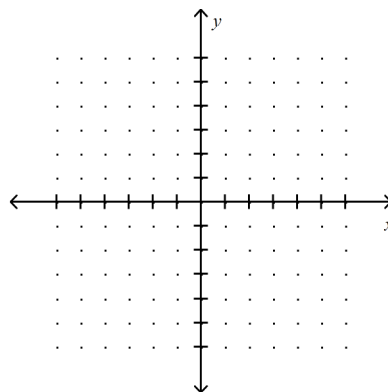
$$2x + 6y = 18$$



4. Solve the system by graphing. State the solution.

$$x + 2y = 10$$

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



5. Solve the system by substitution. State the solution.

$$-4x + 3y = 8$$

$$y = 3x + 6$$

6. Solve the system by substitution. State the solution.

$$y = -5x - 8$$

$$y = -2x - 2$$

7. Solve the system by substitution. State the solution.

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

$$x + 4y = 24$$

8. Solve the system by elimination. State the solution.

$$-4x - 7y = 15$$

$$-8x + 7y = 9$$

9. Solve the system by elimination. State the solution.

$$3x + 5y = 9$$

$$-9x + y = 21$$

10. Susan solved the following system. Her work is shown below.

$$3x + 7y = 24$$

$$6x + 14y = 28$$

$$\begin{array}{r} -2(3x + 7y = 24) \\ 1(6x + 14y = 28) \\ \hline -6x - 14y = -48 \\ 6x + 14y = 28 \\ \hline 0 = -20 \end{array}$$

What should she write for the solution to the system? Explain.

11. Jimmy solved the following system. His work is shown below.

$$12x - 8y = -20$$

$$-6x + 4y = 10$$

$$\begin{array}{r} 1(12x - 8y = -20) \\ 2(-6x + 4y = 10) \\ \hline 12x - 8y = -20 \\ -12x + 8y = 20 \\ \hline 0 = 0 \end{array}$$

What should he write for the solution to the system? Explain.

12. A corner store sells two kinds of baked goods: cakes and pies. A cake costs \$7 and a pie costs \$4. In one day, the store sold 14 baked goods for a total of \$80. How many cakes did they sell? Write a system of equations that could be used to answer the question. **DO NOT SOLVE.**

13. Mike and Kim invest \$12,000 in equipment to print yearbooks for schools. Each yearbook costs \$5 to print and sells for \$15. How many yearbooks must they sell before their business breaks even? Write a system of equations that could be used to answer the question. **DO NOT SOLVE.**
14. You have a total of 22 coins, all nickels and dimes. The total value is \$1.50. How many dimes do you have? Write a system of equations that could be used to answer the question. Solve the system, then answer the question.
15. A kayaker paddles upstream from camp to photograph a waterfall and returns. The kayaker's speed while traveling upstream is 7 mi/h. The kayaker's speed while traveling downstream is 11 mi/h. What is the kayaker's speed in still water? What is the speed of the current?
- Write a system of equations that can be used to answer the questions. Then solve the system and answer the questions.