

Student: Richelle Willis
Date: 3/15/15
Time: 3:52 PM

Instructor: Nancy Hoeft
Course: College Algebra - 14
Book: Tobey: Beginning Algebra, 8e

Assignment: Chapter 8 Homework

1. In the system $y = -4x - 5$ and $y = -4x + 2$, the lines have the same slope but different y-intercepts. What does this tell about the graph of this system?

Choose the correct answer below.

- ☒ A. The lines are parallel. One line intersects the y-axis at -5 . The other line intersects the y-axis at 2 . There is no solution. The system is inconsistent.
- ☐ B. The two lines coincide. They are the same line. There are an infinite number of solutions. The equations are dependent.
- ☐ C. The lines intersect at one point. There is one solution. The system is consistent.

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2. Solve the following system by graphing. If there isn't a unique solution to the system, state the reason.

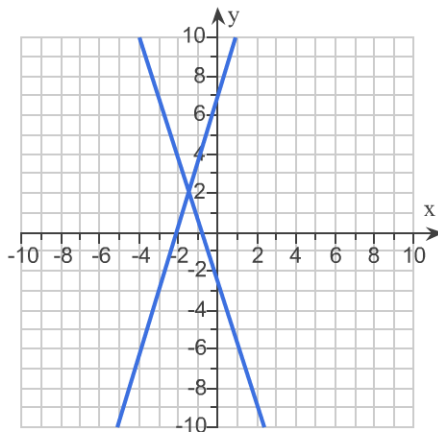
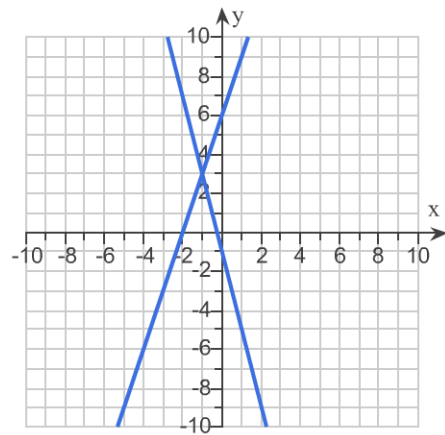
$$\begin{aligned} -3x + y - 6 &= 0 \\ 4x + y + 1 &= 0 \end{aligned}$$

Use the graphing tool to graph the system.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☒ A. The solution is $(-1, 3)$.
(Type an ordered pair.)
- ☐ B. There are an infinite number of solutions. The equations are dependent.
- ☐ C. There is no solution. The system is inconsistent.



YOU ANSWERED:

B

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3. Solve the following system by graphing. If there isn't a unique solution to the system, state the reason.

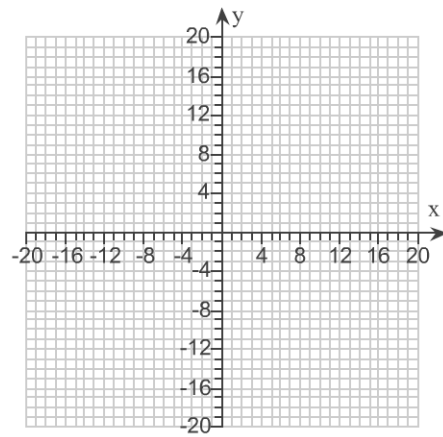
$$\begin{aligned}3x - 2y &= -2 \\ 2x + 3y &= 16\end{aligned}$$

Use the graphing tool to graph the system.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The solution is .
(Type an ordered pair.)
- ☐ B. There are an infinite number of solutions. The equations are dependent.
- ☐ C. There is no solution. The system is inconsistent.



4. Find the solution to the system of equations by the substitution method. Check your answer. Place your solution in the form (x,y).

$$\begin{aligned}7x + 3y &= 19 \\ 3x + y &= 9\end{aligned}$$

The solution is . (Type an ordered pair.)

5. Find the solution to the system of equations. Place your answer in the form (x,y).

$$\begin{aligned}\frac{5}{3}x + \frac{1}{3}y &= -3 \\ -2x + 5y &= 36\end{aligned}$$

The solution is . (Type an ordered pair.)

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6. Find the solution to the following system by the addition method. Check your answers.

$$4x + 5y = 7$$

$$x - 4y = 7$$

The solution is .

(Type an ordered pair, using integers or fractions.)

7. Find the solution to the following system of equations by the addition method. Check your answer.

$$5x - y = -7$$

$$5x + 6y = 7$$

The solution is .

(Type an ordered pair.)

8. Find the solution to the following system of equations by the addition method. Check your answer.

$$7x - 15y = 3$$

$$-x + 6y = 6$$

The solution is .

(Type an ordered pair.)

9. Find the solution. Check your answers.

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

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

The solution is . (Type an ordered pair.)

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10. Solve the following for x and y using the addition method.

$$0.2x + 0.3y = -0.3$$

$$0.5x + 0.4y = -1.1$$

The solution is .

(Type an ordered pair.)

11. Solve the following for x and y using the addition method.

$$-0.7x - 0.32y = -4$$

$$3x + 2y = 14$$

The solution is .

(Type an ordered pair.)

12. If possible, solve by an algebraic method (substitution or addition method, without the use of graphing). Otherwise, state that the problem has no solution or an infinite number of solutions.

$$-5x - 5y = 10$$

$$9x + 3y = -24$$

Select the correct choice below and fill in any answer boxes in your choice.

☐ A. The solution is . (Type an ordered pair.)

☐ B. There are infinitely many solutions.

☐ C. There is no solution.

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13. If possible, solve by an algebraic method (substitution or addition method, without the use of graphing). Otherwise, state that the problem has no solution or an infinite number of solutions.

$$\begin{aligned}3x + 7y &= -6 \\ -18x - 42y &= 37\end{aligned}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The solution is . (Type an ordered pair.)
- ☐ B. There are infinitely many solutions.
- ☐ C. There is no solution.

14. If possible, solve by an algebraic method (substitution or addition method, without the use of graphing). Otherwise, state that the problem has no solution or an infinite number of solutions.

$$\begin{aligned}-3x + 5y &= 10 \\ 30x - 50y &= -100\end{aligned}$$

Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The solution is . (Type an ordered pair.)
- ☐ B. There are infinitely many solutions.
- ☐ C. There is no solution.

15. Solve by any algebraic method. If there is not one solution to the system of equations, state the reason.

$$\begin{aligned}2x - 6y &= 34 \\ 9x + 7y &= 17\end{aligned}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The solution is . (Type an ordered pair.)
- ☐ B. There are an infinite number of solutions. The equations are dependent.
- ☐ C. There is no solution. The system is inconsistent.

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16. Solve by any algebraic method. If there is not one solution to a system of equations, state the reason.

$$\begin{aligned}x - 4y + 4 &= 0 \\ 7(x - 4y + 1) &= 28\end{aligned}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The solution of the system is . (Type an ordered pair.)
- ☐ B. There are an infinite number of solutions. The equations are dependent.
- ☐ C. There is no solution. The system is inconsistent.

17. Remove parentheses and solve the system for (a,b).

$$\begin{aligned}10(a + 11) &= b + 1 \\ 11(a - b) &= a + 1\end{aligned}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The solution to the system is .
(Type an ordered pair. Use integers or fractions for any numbers in the expression.)
- ☐ B. There are infinitely many solutions.
- ☐ C. There is no solution.

18. An art dealer sold 11 etchings for \$565. He sold some of them at \$45 each and the rest at \$55 each. How many etchings did he sell at each price?

number of \$45 etchings sold =

number of \$55 etchings sold =

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19. A girl worked last summer. The first week she was there, she worked a total of 21 hours in the office. She was paid \$13.50 an hour for day shift and \$15.50 an hour for night shift work. She earned \$311.50 for her first week of work. How many hours did she spend on the day shift? How many hours did she spend on the night shift?

She spent hours on the day shift and hours on the night shift.

20. At a concession stand, five hot dogs and two hamburgers cost \$11.00; two hot dogs and five hamburgers cost \$11.75. Find the cost of one hot dog and the cost of one hamburger.

The cost of one hot dog is \$ and the cost of one hamburger is \$.