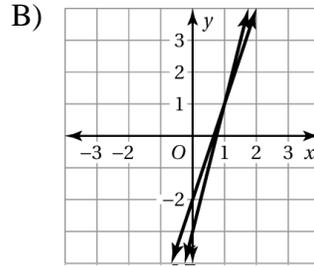
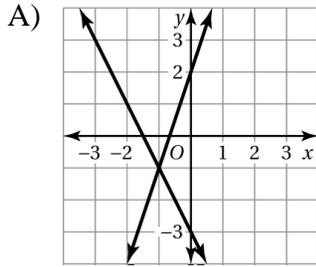


Systems of Linear Equations Review

Match the system of linear equations with the corresponding graph. Use the graph to estimate the solution. Check your solution.

1) $y = 3x - 2$
 $y = 4x - 3$

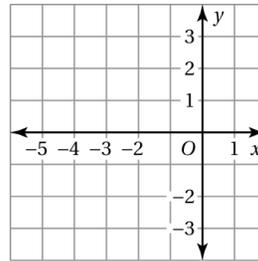
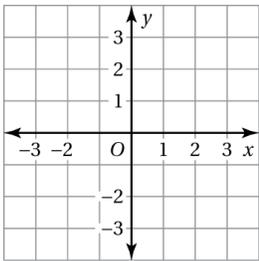
2) $y = -2x - 3$
 $y = 3x + 2$



Solve the system of linear equations by graphing.

3) $y = -2x + 1$
 $y = 2x - 3$

4) $y = 6x - 3$
 $y = 4x - 1$



Solve the system of linear equations by substitution. Check your solution.

5) $y = x + 2$
 $y = 3x - 4$

6) $y = 3x + 4$
 $x + y = 8$

- 7) There are 27 red or blue marbles in a bag. The number of red marbles is 5 less than 3 times the number of blue marbles. How many red marbles are in the bag? How many blue marbles are in the bag?

- 8) A fruit vendor sells 60 pieces of fruit that are either apples or oranges. The ratio of apples to oranges is 3 : 2. How many apples did the vendor sell? How many oranges did the vendor sell?

Solve the system of linear equations by elimination. Check your solution.

9) $2x + 10y = -20$
 $-x + 4y = 28$

10) $-x + 5y = 20$
 $12y = 2x + 60$

Without graphing, determine whether the system of linear equations has *one solution*, *infinitely many solutions*, or *no solution*. Explain your reasoning.

11) $y = 4x + 6$
 $2y = 8x + 12$

12) $y = 3x + 5$
 $y = 3x - 5$

13) $y = 2x + 7$
 $y = 3x - 1$

14) What is the solution to the equation below?

$$-2x - 4 = -16$$

- A. -10 B. 6 C. 6 D. 10

15) A middle school conducts a fire drill. The percent y (in decimal form) of students still inside x minutes after the fire alarm sounds is $y = -0.125x + 1$. After how many minutes are 75% of the students still inside?

16) The steps Andre took to solve the system of linear equations and are shown below. What should Andre change in order to correctly solve the system?

- F. The constants should combine to equal 8.
G. The x -terms should combine to equal $2x$.
H. The constants should combine to equal 2.
I. The x -terms should combine to equal $-6x$.

$$4x + 1 = 2x + 7$$
$$6x = 6$$
$$x = 1$$

17) Which ordered pair is a solution to the system of linear equations below?

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

$$y = x - 1$$

- A. $(-4, 1)$ B. $(3, 4)$ C. $(4, 3)$ D. $(6, 4)$

18) James and Max are saving their allowances to buy laptop computers. James has saved \$30 already and earns a \$5 allowance each week. Max has saved \$10 already and earns a \$10 allowance each week.

- a. Write a system of equations that can represent this situation. Use x to represent the number of weeks and y to represent the total amount saved.

Equation for James _____

Equation for Max _____

- b. After how many more weeks will James and Max have the same amount of money saved?

Use your equations from Part A and the coordinate grid. Check your solution by solving the system using elimination or substitution.

Number of weeks _____

