

**Unit 4 Exam Review****Short Answer**

**Solve the system of equations using substitution.**

1.  $y = 2x + 3$   
 $y = 3x + 1$

2.  $y = 2x - 10$   
 $y = 4x - 8$

**Solve the system using elimination.**

3.  $2x - 2y = -8$   
 $x + 2y = -1$

4.  $3x - 4y = -24$   
 $x + y = -1$

5.  $-10x - 3y = -18$   
 $-7x - 8y = 11$

6. Tell whether the system has *no solution*, *one solution*, or *infinitely many solutions*.

$$y = -x - 5$$

$$y = -x - 3$$

7. Tell whether the system has *no solution*, *one solution*, or *infinitely many solutions*.

$$y = 2x - 3$$

$$y = 5x - 4$$

8. Solve the system of equations.

$$3x + 2y = 7$$

$$y = -3x + 11$$

9. Solve the system of equations.

$$5x + 2y = 13$$

$$5x + 4y = 11$$

10. By what number should you multiply the first equation to solve using elimination?

$$-5x - 4y = -31$$

$$-15x + 3y = -33$$

11. Is  $(5, -2)$  a solution of the linear inequality?

$$y \geq 4x - 5$$

12. Write the following inequality in slope-intercept form.

$$-15x - 3y \geq -12$$

13. The grocery store sells apples for \$4.50 a pound and bananas for \$4.00 a pound. Write an equation in standard form for the weights of apples  $a$  and bananas  $b$  that a customer could buy with \$16.

14. At the beginning of the year, you have a balance of \$350 in your bank account. Each month you deposit \$50.

(a) Write an equation for this situation.

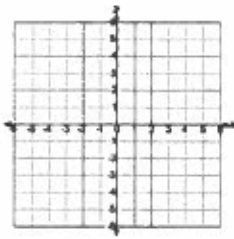
(b) Use the equation to find the balance in June. Hint: June is  $x = 6$ .



20. Solve the below system of linear equations by graphing.

$$y = -1x + 3$$

$$y = 2x - 6$$

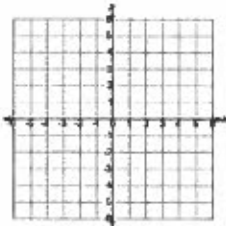


21. Solve the below system of linear equations by graphing.

$$-x + y = 3$$

Solution: \_\_\_\_\_

$$4x + y = -2$$



22. Solve the following system of inequalities by graphing.

$$x + y < 3$$

$$-2x + 4y \geq 0$$

