Algebra 1 (3206) Name:_____

Final Exam review Term 3 Chapter 7

Solve by Graphing:

1. $y = x + 4$

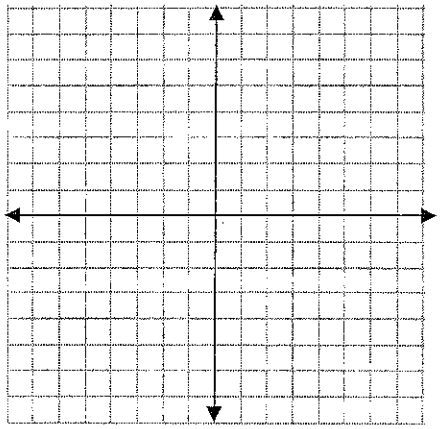
   $y = 4x + 1$

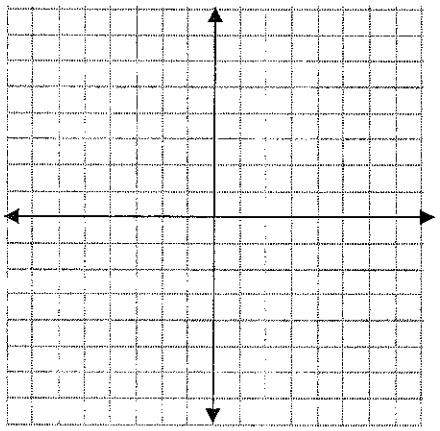
2. $y = 1$

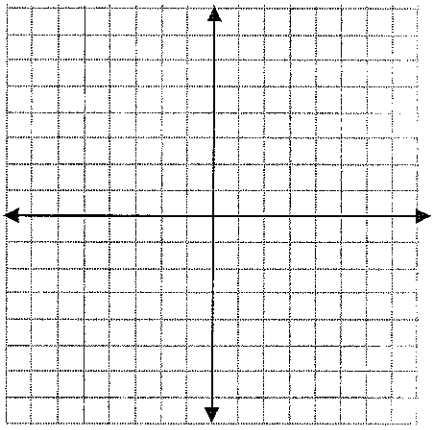
   $y = x$

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

   $y = -3x + 8$







Without graphing, tell whether the system has *one solution, no solution,* or *infinitely many* solutions. Hint: make sure the equations are in $y = mx + b$ form.

4. $y = -3x + 7$

   $y = -3x - 4$

5. $x + y = 4$

   $2x + 2y = 8$

6. $y = 2x + 1$

   $2x + y = -8$

Solution:_____ Solution:_____ Solution:_____

Solve each system using any method and circle your answer.

7. $y = 6x - 4$

   $y = -2x + 28$

8. $m = 4n + 11$

   $-6n + 8m = 36$

9. $2x + 5y = 17$

$6x - 5y = -9$

10. $2x - 3y = 61$

$2x + y = -7$

11. $y = 2x$

$y = x - 1$

12. $3x - 10y = -25$

$4x + 40y = 20$

Write a system of equations and solve the following problems:

13. The sum of two numbers is 20. Their difference is 4. Find the two numbers.

14. Suppose you invest $12,000 in equipment to manufacture a new board game. Each game costs $2.50 to manufacture and sells for $18.00. How many games must you sell for your business to break even?

15. The math and science club had fundraisers to buy supplies. The math club spent $135 buying six cases of juice and one case of bottled water. The science club spent $110 buying four cases of juice and two cases of bottled water. How much did each case of juice and each case of water cost?

16. For making a payment, Marie used dimes and quarters only. The payment was for a total of $1.65, and Marie used a total of 9 coins. How many dimes and quarters did she have?

17. At the football game, the ratio of boys to girls is 5 to 3. There are 104 total people at the game. How many of each gender are at the game?

18. The perimeter of a rectangle is 114 ft. Its length is three more than twice its width. Find the dimensions of the rectangle.