

## Chapter 6-B Test Review January 2012

- *Review for Chapter 6B is due on the day of the test.*
- *Review will not be graded unless answers are written on separate paper.*
- *In order to be eligible to retest, this review must be complete, accurate, and turned in*
- *All homework assignments must be turned in. Missing assignments will void retest eligibility.*

Solve each system of equations by graphing, substitution, and elimination. Note your answers should be the same. Express your answer as an ordered pair.

1. 
$$\begin{cases} 3x + 4y = -36 \\ -2x + 4y = -16 \end{cases}$$

2. 
$$\begin{cases} 3x + y = -3 \\ y = x + 5 \end{cases}$$

3. 
$$\begin{cases} 4x - 4y = -16 \\ x - 2y = -12 \end{cases}$$

4. 
$$\begin{cases} 3x - 6y = 12 \\ 2x + 6y = -12 \end{cases}$$

5. 
$$\begin{cases} 3x - 2y = 15 \\ x - 2y = 5 \end{cases}$$

6. 
$$\begin{cases} 2x - 5y = -7 \\ 5x - 3y = 11 \end{cases}$$

7. 
$$\begin{cases} y = -x + 8 \\ x + y = 7 \end{cases}$$

8. Janice is going on vacation and needs to leave her dog at a kennel. Nguyen's Kennel charges \$15 per day plus \$20 for a processing fee. The Pup Palace Kennel charges \$12 per day, and has a \$35 processing fee. After how many days is the Pup Palace Kennel cheaper than Nguyen's Kennel?
9. The Fun Guys game rental store charges an annual fee of \$5 plus \$5.50 per game rented. The Game Bank charges an annual fee of \$17 plus \$2.50 per game. For how many game rentals will the cost be the same at both stores? What is that cost?
10. At the local pet store, zebra fish cost \$2.10 each and neon tetras cost \$1.85 each. If Marsha bought 13 fish for a total cost of \$25.80, not including tax, how many of each type of fish did she buy?
11. Eric has some quarters and nickels in his pocket. He has 8 more nickels than quarters. The total value is \$3.70. Write a system of equations that can be used to find the number of quarters and nickels Eric has. How many quarters and nickels does Eric have?
12. A) The length of a rectangle is 3 centimeters more than 3 times the width. If the perimeter of the rectangle is 46 centimeters, find the dimensions of the rectangle. SOLVE  
B) The sum of the perimeters of two different squares is 54 centimeters, and the difference between their perimeters is 14 centimeters. If  $x$  represents the side length of the smaller square, write a system of equations that could be used to find the dimensions of the squares. DO NOT SOLVE

**Classify, graph and give the number of solutions:**

13. 
$$\begin{cases} x - 8y = 6 \\ 2x - 16y = 12 \end{cases}$$

14. 
$$\begin{cases} -6x - 3y = 18 \\ -y = -2x + 2 \end{cases}$$

15. Tell whether the ordered pair  $(5, -3)$  is a solution of the system 
$$\begin{cases} -3x + 2y = -21 \\ -x - y = -2 \end{cases}$$
.

16. Tell whether  $(8, 5)$  is a solution of  $y > x + 7$ .

17. Tell whether  $(5, 6)$  is a solution of  $y < 5x + 8$ .

18. Graph the solutions of the linear inequality  $-8x + 2y > -6$ .

19. Tony has \$18 to buy apples and bananas for a fruit salad. Apples cost \$2 per pound and bananas cost \$1 per pound. Write and graph an inequality to describe the situation. Then give two possible combinations of pounds of apples and bananas that Tony can buy.

20. Graph the inequality  $0 > 9 + 6x - 9y$ .

**Spiral exam:** will consist of multiple choice and short answer questions selected from chapters 1 through 5. Use old chapter reviews, the final exam review, and chapter reviews out of the text book. (note: all reviews are available on my web site)