Name _____ Class _____ Date _____

Chapter 4 Test

Form G

Do you know HOW?

Solve each system by graphing. Tell whether the system has *one solution, infinitely many solutions,* or *no solution.*

1. $x - 2y = 3$
$y = -2x + 6$

2. $x + y = 3$
$3x - 2y = 4$

3. $2x = -4y + 10$
$6y = -3x + 12$

Solve each system using substitution.

4. $3x - 5y = -1$
$x - y = -1$

5. $x + 2y = -1$
$2x - 3y = 12$

6. $2x + 3y = 9$
$3x + 4y = 5$

7. $7x = 2y + 1$
$4y = -3x + 15$

8. $x + \frac{y}{2} = 4$
$\frac{x}{3} + 2y = 5$

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

Solve each system using elimination.

10. $x + y = 4$
$x - y = 6$

11. $-2x + 3y = 9$
$2x - 2y = -4$

12. $x + y = 7$
$3x - 2y = 11$

13. $7x - 8y = 11$
$8x - 7y = 7$

14. $0.4x + 0.3y = 1.7$
$0.7x - 0.2y = 0.8$

15. $3x - 7y + 10 = 0$
$y - 2x - 3 = 0$

Write a system of equations to model each situation. Solve by any method.

16. Ten years from now, Anna will be twice as old as Barbara. Five years ago, Anna was three times as old as Barbara. What are the present ages of Anna and Barbara?

17. The ratio of the weekly incomes of two persons is 9:7. The difference in their weekly incomes is $200. What are their weekly incomes?

18. A change purse contains a total of 100 nickels and dimes. The total value of the coins is $7. How many coins of each type does the purse contain?

Chapter 4 Test (continued) *Form G*

Graph each inequality in the coordinate plane.

19. $2x + 3y \leq 6$

20. $2x - y \geq 1$

21. $-3x + 2y < 5$

Solve each system of inequalities by graphing.

22. $2x + 3y \leq 6$
$3x + 2y \leq 6$

23. $x + y \geq 9$
$3x + y \geq 12$

24. $5x + y > 10$
$2x + y < 15$

25. For a party, you can spend no more than \$20 on cakes. Egg cake cost \$4 and cream cake cost \$2. Write the linear inequality that models the situation. Graph the inequality.

Do you UNDERSTAND?

26. Open-Ended Write a system of linear equations that has infinitely many solutions.

27. Error Analysis A student determined that (1, 1) is one of the solutions of the linear inequality $y \leq 2x - 3$, as shown below. What error did the student make?

$y \leq 2x - 3$

$1 \leq 2(1) - 3$

$1 \leq 1$