Name _____ Class _____ Date _____

Practice 6-6

Systems of Linear Inequalities

Solve each system of inequalities by graphing. Show your work.

1. $y < 6$
$y > 3$

2. $x < 7$

3. $x < 2$
$y > 2$
$x > 5$

4. $x + y > -2$
$-x + y < 1$

5. $x + y < 2$
$x + y > 5$

6. $y < -5x + 6$
$y > 2x - 1$

7. $y < 2x - 3$
$-2x + y > 5$

8. $-x + 3y < 12$
$y \geq -x + 4$

9. $y \leq -\frac{1}{2}x + 3$
$y \geq -\frac{5}{3}x + 2$

10. $y \geq \frac{3}{4}x + 1$
$y \geq -\frac{2}{3}x - 1$

11. $6x + 4y > 12$
$-3x + 4y > 12$

12. $3x + y < 6$
$-2x + y < 6$

13. $-4x + 2y < -2$
$-2x + y > 3$

14. $-5x + y > -2$
$4x + y < 1$

15. $y < \frac{9}{5}x - 8$
$-9x + 5y > 25$

16. $5x + 4y < 1$
$8 \geq -10x + 24$

17. $6x + 8y < 32$
$-4x + 6y < 24$

18. $x + 7y < 14$
$x - 6y > -12$

19. In basketball you score 2 points for a field goal and 1 point for a free throw. Suppose that you have scored at least 3 points in every game this season, and have a season high score of 15 points in one game. How many field goals and free throws could you have made in any one game?

a. Write a system of two inequalities that describes this situation.

b. Graph the system to show all possible solutions.

c. Write one possible solution to the problem.

20. Suppose you need to use at least $1.00 worth of stamps to mail a package. You have as many $.03 stamps as you need but only four $.32 stamps. How many of each stamp can you use?

a. Write a system of two inequalities that describes this situation.

b. Graph the system to show all possible solutions.

c. Write one possible solution to the problem.

21. A grandmother wants to spend at least $40 but no more than $60 on school clothes for her grandson. T-shirts sell for $10 and pants sell for $20. How many T-shirts and pants could she buy?

a. Write a system of two inequalities that describes this situation.

b. Graph the system to show all possible solutions.

c. Write two possible solutions to the problem.