SECTION 2-3

EXERCISE A

Solve each system of inequalities by graphing.

1) $x \leq 4$
$y > 2$

2) $y \leq -4x - 3$
$y > -4x + 1$

3) $y < |x - 1| + 2$
$x + y > 2$

4) $y \leq 3x + 3$
$y \leq 3x - 2$

5) $2x - y \geq -1$
$x + y \leq 4$
$x + 4y \geq 4$

6) $y \leq x$
$y \geq -3$
$3y + 5x \leq 16$

7) Find the coordinates of the vertices by graphing the system:
$y \geq |x| - 4$
$y \leq 3$

EXERCISE B

Solve each system of inequalities by graphing.

8) $x \leq -1$
$y \geq -4$

9) $2x + 5y \leq -15$
$y > -\frac{2}{5}x + 2$

10) $3x + 2y \geq 6$
$4x - y \geq 2$

11) $y > x - 3$
$y < |x + 1| + 4$

12) $y \geq 2x + 1$
$y \leq 2x - 2$
$3x + y \leq 9$

13) $x \leq 1$
$-3y > -6x - 3$
$x + 2y \geq -3$

EXERCISE C

Find the coordinates of the vertices of the figure formed by each system of inequalities.

14) $x \leq 3$
$-x + 3y \leq 12$
$4x + 3y \geq 12$

15) $x + y \leq 2$
$x - 2y \leq 8$
$3x - y \geq -2$

16) The Breaking Bread Bakers are baking pumpkin bread and soda bread for this week's specials. They have at most 24 cups of flour and at most 26 teaspoons of baking powder on hand.

a) Graph the inequalities that represent how many loaves of each type the bakers can bake.
b) List three different combinations of breads they can make.
c) Which combination uses all of the available flour and baking soda?

Pumpkin Bread
2 cup of flour
1 tsp. baking powder

Soda Bread
1 1/2 cup of flour
2 1/2 tsp. baking powder

ANSWERS:
1-6) See Mr. Paull
7) (-7, 3), (7, 3)
8-13) See Mr. Paull
15) (0, 2), (4, -2), (-2.4, -5.2)