Section 9.1 Extra Practice

1. Which ordered pairs are solutions to each given inequality?

a) $x - 3y < 18$

A $(3, -5)$ **B** $(0, 0)$ **C** $(-5, 3)$ **D** $(5, -5)$

b) $0 < 2x - 5y$

A $(5, 2)$ **B** $(2, 5)$ **C** $(-5, 2)$ **D** $(2, -5)$

c) $x - 6 \leq y$

A $(1, 6)$ **B** $(6, 1)$ **C** $(-1, 6)$ **D** $(-1, -6)$

2. Consider each inequality.

i) Express y in terms of x. Identify the slope and the y-intercept.

ii) Indicate whether the boundary should be a solid line or a broken line.

iii) Use technology to graph the inequality.

a) $2x - 7y \geq 14$ **b)** $5 - x + 3y < 0$

c) $y + 4 > 0$ **d)** $5x + 2y \leq 4$

3. Consider each inequality.

i) Determine the x-intercept and the y-intercept of the boundary.

ii) Indicate whether the boundary should be a solid line or a broken line.

iii) Use technology to graph the inequality.

a) $y < 2x + 5$ **b)** $x - 5y \geq 25$

c) $3x + y + 6 > 0$ **d)** $x + 5 < 0$

4. Graph each inequality.

a) $y \leq -2x + 7$ **b)** $3x + y < -9$

c) $x \leq 2y + 8$ **d)** $4x - 5y \geq 20$

5. Ben is buying snacks for his friends. He has $10.00. The choices are apples for $0.80 and muffins for $1.25.

a) Write an inequality in two variables to model this situation. Define your variables.

b) State the restrictions on the variables.

c) Graph the inequality.

d) Why is $(5, 4.8)$ not a solution?

6. Determine the inequality that corresponds to each graph.

a)

b)

c)