

Section 9.1 Extra Practice

- Which ordered pairs are solutions to each given inequality?
 - $x - 3y < 18$
A (3, -5) B (0, 0) C (-5, 3) D (5, -5)
 - $0 < 2x - 5y$
A (5, 2) B (2, 5) C (-5, -2) D (2, -5)
 - $x - 6 \leq y$
A (1, 6) B (6, 1) C (-1, 6) D (-1, -6)

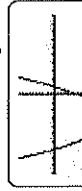

- Consider each inequality.
 - Express y in terms of x . Identify the slope and the y -intercept.
 - Indicate whether the boundary should be a solid line or a broken line.
 - Use technology to graph the inequality.
 - $2x - 7y \geq 14$
 - $5 - x + 3y < 0$
 - $y + 4 > 0$
 - $5x + 2y \leq 4$

- Consider each inequality.
 - Determine the x -intercept and the y -intercept of the boundary.
 - Indicate whether the boundary should be a solid line or a broken line.
 - Use technology to graph the inequality.
 - $y < 2x + 5$
 - $x - 5y \geq 25$
 - $3x + y + 6 > 0$
 - $x + 5 < 0$

- Graph each inequality.
 - $y \leq -2x + 7$
 - $3x + y < -9$
 - $x \leq 2y + 8$
 - $4x - 5y \geq 20$

- Ben is buying snacks for his friends. He has \$10.00. The choices are apples for \$0.80 and muffins for \$1.25.
 - Write an inequality in two variables to model this situation. Define your variables.
 - State the restrictions on the variables.
 - Graph the inequality.
 - Why is (5, 4.8) not a solution?

Section 9.2 Extra Practice

- Determine the inequality that corresponds to each graph.
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- For the graph of $f(x) = (x - 1)(x + 7)$, solve the following.
 - $(x - 1)(x + 7) = 0$
 - $(x - 1)(x + 7) > 0$
 - $(x - 1)(x + 7) < 0$

- Determine the solution to each inequality.
 - $4x^2 + 18 > 17x$
 - $-8x^2 + 2x + 15 \geq 0$
 - $x^2 - x + 2 \leq 0$
 - $4x^2 - 12x + 9 \leq 0$

- Given the function $f(x) = x^2 + 6x$, determine the zeros of the function.
 - $x^2 + 4x + 3 > 2x^2$
 - $x(x - 3) \leq 5$
 - $(x - 1)(x + 5) \geq 1$
 - $x^2 - 2x - 3 \geq 2x^2 + 9x + 4$

- Is the value of x a solution to the given inequality? Show your work.
 - $x^2 + 3x > -5, x = 0$
 - $(x - 4)(x + 3) \leq 7, x = 0$
 - $2x - 3 > x^2 + x, x = 1$
 - $3x^2 + x - 9 \geq 0, x = -2$



Name: _____ Date: _____

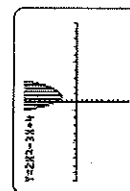
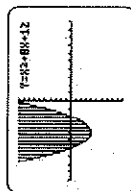
BLM 9-6

Section 9.3 Extra Practice

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

- a) $y > -x^2 + 4x - 3$ A (2, 1) B (0, 0) C (3, -2) D (1, 1)
 b) $y \geq x^2 + 6x - 4$ A (-2, -7) B (0, 0) C (2, 5) D (-7, 2)
 c) $y \leq 3(x - 1)^2 + 4$ A (1, 5) B (0, 7) C (-1, 9) D (3, 18)
 d) $y < (3x - 1)(x + 2)$ A (-2, 0) B (1, 3) C (-5, 10) D (0, 5)

2. Write an inequality to describe each graph. The given equation for each boundary is part of the solution.



3. Graph each quadratic inequality.

- a) $y < (x - 5)^2 + 4$
 b) $y > (2x + 1)^2$
 c) $3y \leq (x - 1)^2 + 6$
 d) $y - 4 \geq 3(x + 2)^2$

4. Graph each quadratic inequality.

- a) $y > -x^2 - 3x - 4$
 b) $y < (x - 5)(x + 7)$
 c) $y \geq 6x^2 - x - 1$
 d) $-2y \geq x^2 - 1$

5. The stone archway shown can be defined by $10x^2 + 9y - 90 = 0$. Write an inequality to represent the region below the archway.

