

## 7.1 ~ Graphing Inequalities

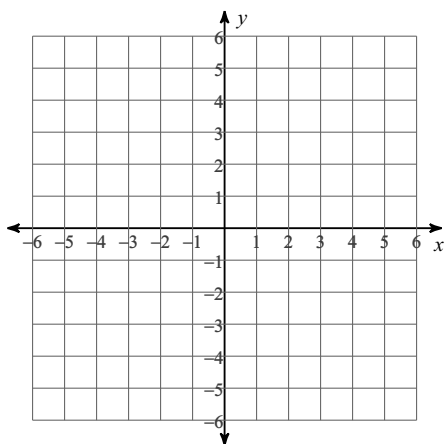
Past due on \_\_\_\_\_ Period \_\_\_\_\_

**Write a linear inequality in two variables to represent the problem situation. Refer to the 7.1 example "Writing a Linear Inequality in Two Variables" in the Chapter 7 Summary.**

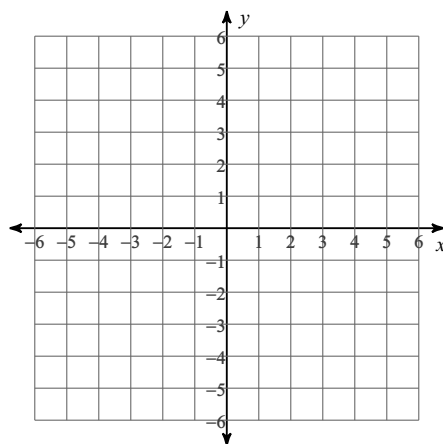
- 1) Tayna is baking zucchini muffins  $x$  and pumpkin muffins  $y$  for a school event. She needs at least 500 muffins for the event.
- 2) Hiro needs to buy new pens  $x$  and pencils  $y$  for school. Pencils cost \$1 each and pens cost \$2.50 each. He has \$10 to spend.
- 3) Ali makes decorative flower pots. She wants to charge  $y$  dollars more than her materials and labor costs. It costs her \$20 to purchase the materials she charges \$6 per hour of labor  $x$ .

**Graph each linear inequality. Use the test point  $(0, 0)$  to determine which half-plane should be shaded. Refer to the 7.1 example "Graphing a Linear Inequality in Two Variables" in the Chapter 7 Summary.**

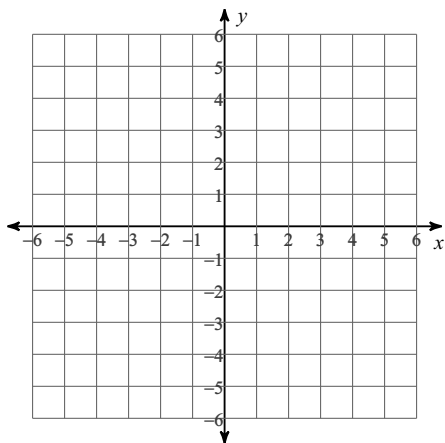
4)  $y \leq -\frac{3}{4}x + 4$



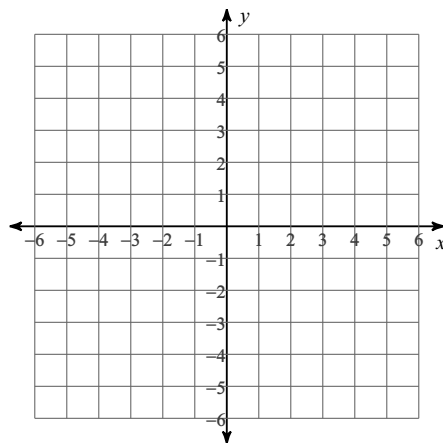
5)  $y > \frac{5}{3}x - 3$



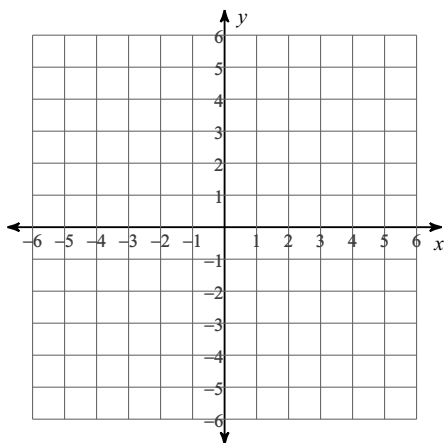
6)  $x < 3$



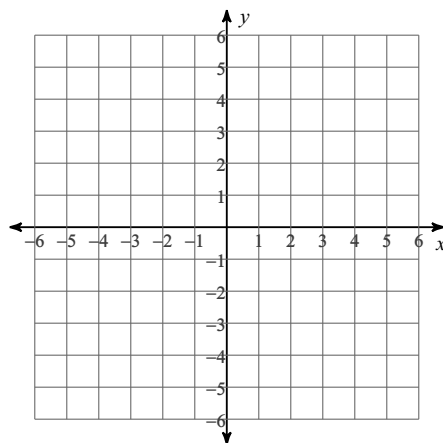
7)  $y \geq -2x + 4$



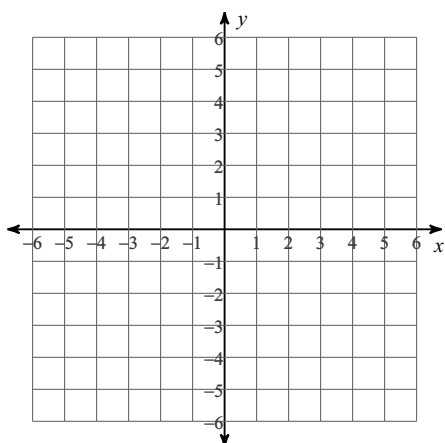
8)  $3x - 2y \leq -10$



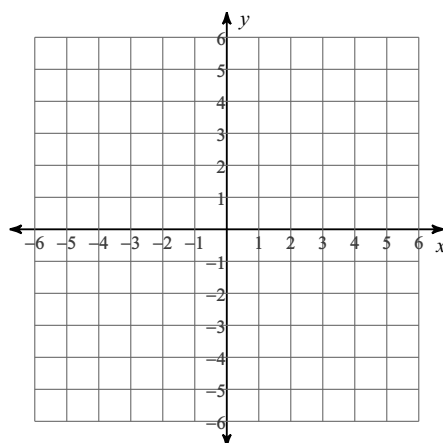
9)  $9x + 5y > -20$



10)  $2x - y \geq 4$



11)  $x + 5y < -5$



**Solve each system of equations using the appropriate method: either substitution or linear combinations. Write your solution as an ordered pair  $(x, y)$ . Refer to the 6.1 example “Solving Systems of Linear Equations Using the Substitution Method” or the 6.2 example “Solving a System of Equations Using the Linear Combinations Method” in the Chapter 6 Summary.**

12)  $x + 4y = 1$   
 $10x + 9y = -21$

13)  $5x - 6y = 18$   
 $2x + 2y = -28$