1. **BIRD BATH** Melissa wants to put a bird bath in her yard at point \((x, y)\), and wants it to be inside the enclosed shaded area shown in the graph.

   First, she checks that \(x \geq -3\) and \(y \geq -2\). What linear inequality must she check to conclude that \((x, y)\) is inside the triangle?

   \[ x + y \leq 3 \]

2. **SQUARES** Matt finds a blot of ink covering his writing in his notes for math class. He sees “A square is defined by \(|x| \leq 8\) and \(_\). Write an inequality that completes this sentence.

   Sample answer: \(|y| \leq 8\).

3. **HOLIDAY** Amanda received presents and cards from friends over the holiday season. Every present came with one card and none of her friends sent her more than one card. Less than 10 of her friends sent only a card. Describe this situation using inequalities.

   Let \(p\) be the number of presents and \(c\) be the number of cards. \(p \leq c\) and \(c - p < 10\)

4. **DECK** The Wrights are building a deck. The deck is defined by the inequalities \(x \leq 5, 0.25x + y \geq -4.75, y \leq 5,\) and \(4.5x + y \geq -17.5\). Graph the inequalities and find the coordinates of the deck’s corners.

   \((5, 5), (-5, 5), (5, -6), (-3, -4)\)

5. **TICKETS** The auditorium at McCaskey East High School in Lancaster, PA has 800 seats. Suppose that the drama club has a goal of making $3400 each night of their spring play to cover expenses and raise money for the club. Adult tickets are $7 and student/senior tickets are $4.

   a. Write a system of inequalities for the number of seats and the money raised by the drama club.

   \[ 800 \geq x + y; \quad 3400 \leq 7x + 4y \]

   b. Graph the inequalities on the graph below.

   c. Could the club meet its goal by selling 200 adult and 475 student/senior tickets? **No, they would only make $3300**