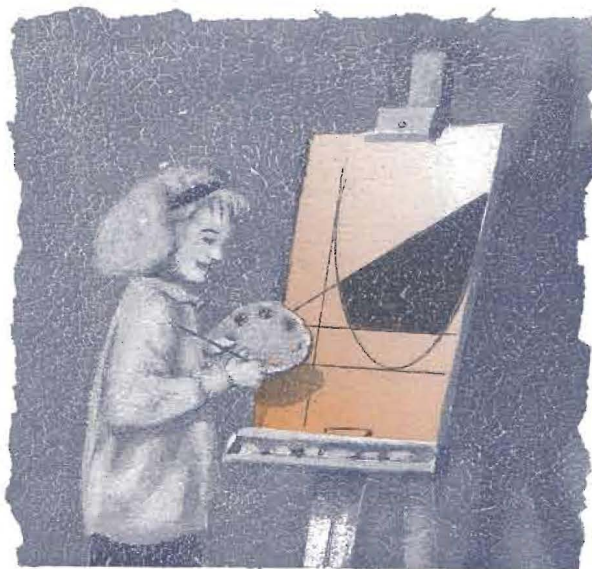


# Algebra Pictures



You have been using pictures to help with problems in algebra. In this activity, you will use algebraic inequalities to make artistic pictures (or at least pictures someone might be interested in looking at). But one important change is that these inequalities are no longer all linear.

For each of Questions 1 through 3, make a picture by showing the solution set for the given system of inequalities.

1.  $y \leq x + 8$

$$y \leq 16 - x$$

$$y \geq (x - 4)^2$$

2.  $y \leq 2x + 4$

$$y \leq 28 - 2x$$

$$y \geq 2$$

$$y \leq 10$$

3.  $y \leq \sqrt{16 - x^2}$

$$y \geq -\sqrt{16 - x^2}$$

$$y \leq \frac{1}{2}x^2$$

4. Create an interesting picture using systems of inequalities. Your picture can be made up of several parts, such that each individual part is the solution set for a system of inequalities.