1. \( f(x) = 2x^2 - 4x - 1 \)
   (a) Convert to standard form.
   (b) Identify the vertex.
   (c) Identify the axis of symmetry.

2. What is the largest rectangular area one can enclose with 14 inches of string?
   (a) Let \( x \) be the width of the rectangle. What does the length have to be (in terms of \( x \))? 
   (b) What is the area of the rectangle? (You will get a quadratic function.) 
   (c) Use your calculator to graph the area function. Now identify the vertex of the parabola. 
   (d) What is the \( y \) value of this point? That’s the largest area (in \( \text{in}^2 \)). 
   (e) What is the \( x \) value of this point? That’s the width (in inches) of the largest rectangle. 
   (f) What is the length of the largest rectangle?
3. \( f(x) = -(x + 2)^2 - 3 \)

(a) Find the \( x \)- and \( y \)-intercepts of the graph.

(b) Convert to general form.

(c) Find the domain and range of the function.

(d) Identify the vertex.

(e) Identify the axis of symmetry.

(f) Determine whether the vertex yields a relative and absolute maximum or minimum.

(g) Graph.