Precalculus Section 2.3 Exercises

1. Graph the following functions. On each graph, label the vertex and the x- and y-intercepts.

   (a) $f(x) = -4x^2 - 8x - 3$

   (b) $f(x) = x^2 - 5x + 6$

   (c) $f(x) = 2(x-1)^2 - 4$

2. It takes a child 1 hour longer than an adult to fill a certain box with candy. If a child and an adult work together, they can fill the box in half an hour. How long does it take a child to fill the box alone?

3. A monument consists of two cubical blocks of granite, the smaller resting on the larger. The total height of the monument is 5 feet, and the area of the exposed surface is 61 square feet. Find the dimensions of the blocks.