1. Your client wants to build a 2000 square-foot greenhouse. In order to maximize sunlight, she wants the greenhouse to have a perimeter of 240 ft. If the greenhouse has a rectangular footprint, what are the dimensions? Use the following steps to solve the problem.
   a. Write down the data provided in the problem statement.
   
   b. Draw a sketch and label it. Make sure the goal of the problem is included on the sketch.
   
   c. Write down the conditions for the problem. Each condition typically is an equation formed by writing a particular quantity two ways. For example, one condition for this problem involves area.
      
      Area (A) = 2000sf
      and
      A = Length (L) x Width (W).
      Therefore
      L x W = 2000 sf
   
   d. Explain (in words) how to calculate an answer.
   
   e. Calculate the answer.
   
   f. Check the answer.
2. You wish to make a sail shaped like a right triangle (one edge vertical, one edge horizontal). The area of the sail must be 54 sf and the ratio of height to width must be 3 to 1. What are the dimensions of the sail?
   a. Write down the data provided in the problem statement.

   b. Draw a sketch and label it. Make sure the goal of the problem is included on the sketch.

   c. Write down the conditions for the problem.

   d. Explain (in words) how to calculate an answer.

   e. Calculate the answer.

   f. Check the answer.