You want to build a pen for your pet pig using all of the 48 feet of fencing stored in your shed. The landlord agrees to let you build your pen only if it is in the shape of an isosceles triangle (two sides have the same length). What are the lengths of the sides of the pen to enclose an area of exactly 108 sf, as recommended in your “Pig Owners Guide”. Show all of your steps for complete credit (error on the side of providing too much information).

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 (equations) for the problem. For each condition

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