**Activity 4.3.5 Similarity in Equilateral Triangles**

1. Measure the sides of the three triangles below (to the nearest 0.1 cm). Verify that the triangles are equilateral.

*AB = \_\_\_\_\_\_ FG = \_\_\_\_\_\_\_\_\_\_ LM = \_\_\_\_\_\_\_\_\_\_\_\_*

*BC = \_\_\_\_\_\_ GH = \_\_\_\_\_\_\_\_\_\_ MN = \_\_\_\_\_\_\_\_\_\_\_\_*

*CA = \_\_\_\_\_\_ HF = \_\_\_\_\_\_\_\_\_\_ NL = \_\_\_\_\_\_\_\_\_\_\_\_*

1. Take two of the triangles, say ∆*ABC* and ∆*FGH*. Are the pairs of corresponding sides proportional? Explain.
2. Without measuring them, what can you say about the angles of these triangles? Which theorem or theorems from Units 2 and 3 justify your conclusion?
3. Make a conjecture: All equilateral triangles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Prove your conjecture.
5. Are all squares similar? Explain your reasoning.