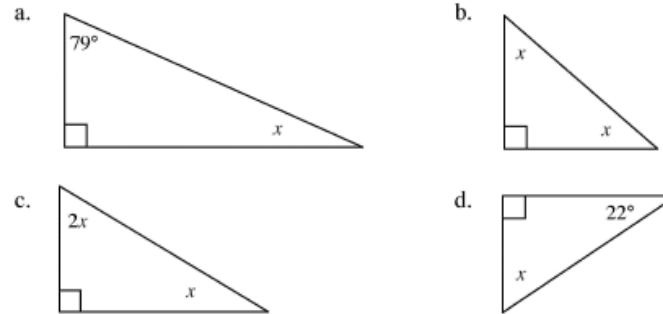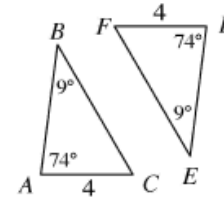4-6.   Use what you know about the angles of a triangle to find the value of x and the angles in each triangle below.

a.

b.

c.

d.

4-7.   Use the triangles at right to answer the following questions.

a. Are the triangles at right similar? How do you know? Show your **reasoning** in a flowchart.

b. **Examine** your work from part (a). Are the triangles also congruent? Explain why or why not.

4-8.   As Randi started to solve for x in the diagram at right, she wrote the equation $7^2 + x^2 = (x+1)^2$.

a.   Is Randi's equation valid? Explain your thinking.

b.   To solve her equation, first rewrite $(x+1)^2$ by multiplying $(x+1)(x+1)$. You may want to review the Math Notes box for Lesson 2.2.2.

c.   Now solve your equation for x.

d.   What is the perimeter of Randi's triangle?
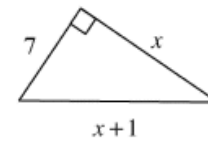
4-9.   Assume that the shapes at right are similar. Find the values of x, y, and z.
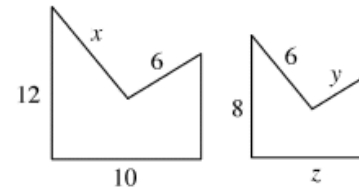
4-10.   Are the lines represented by the equations at right parallel? Support your **reasoning** with convincing evidence.

$$y = -\frac{3}{5}x + 2$$
$$y = -\frac{3}{5}x - 3$$