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**5-46.** For each triangle below, use your triangle shortcuts from this lesson to find the missing side lengths. Then find the area and perimeter of the triangle.

* 1.  b. 

**5-47.** Use the relationships found in each of the diagrams below to solve for *x* and *y*. Assume the diagrams are not drawn to scale. State which geometric relationships you used.

a. b.

c.d.

**5-48.** On graph paper, graph  if *A*(1, 6) and *B*(5, 2).

1. Find *AB* (the length of ). Leave your answer in **exact form**. That is, do not approximate with a decimal. Explain your method.
2. Reflect  across the *y*-axis to create . What type of shape is ABB′A′ if the points are connected in order? Then find the area of ABB′A′.

**5-50.** Decide if each pair of triangles below are similar. If they are similar, show a flowchart that organizes your **reasoning**. If they are not similar, explain how you know.

a. b.

c.d.