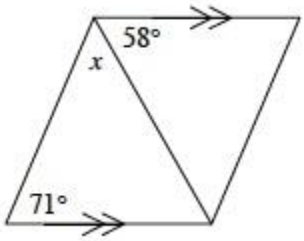
3-69. On graph paper, plot *ABCD* if *A*(0, 3), *B*(2, 5), *C*(6, 3), and *D*(4, 1).

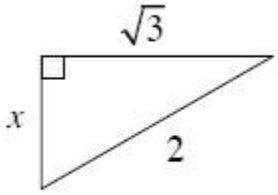
1. Rotate *ABCD* 90° clockwise (↻) about the origin to form *A′B′C′D′*. Name the coordinates of *B′*.
2. Translate *A′B′C′D′* up 8 units and left 7 units to form *A″B″C″D″*. Name the coordinates of *C″*.
3. After rotating *ABCD* 180° to form *A‴B‴C‴D‴*, Arah noticed that *A‴B‴C‴D‴* position and orientation was the same as *ABCD*. What was the point of rotation? How did you find it?

3-70. Use the relationships in each diagram below to solve for *x*. **Justify** your solution by stating which geometry relationships you used.

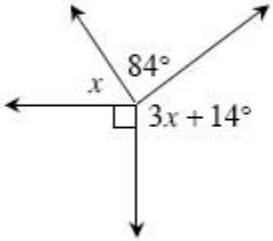
a.



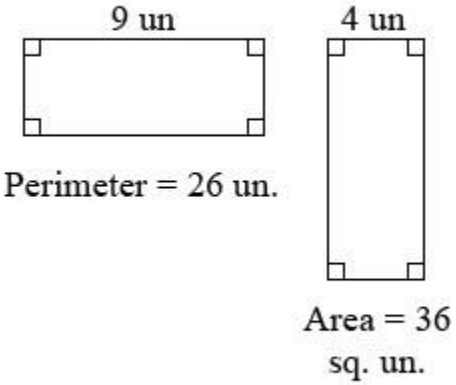
c.



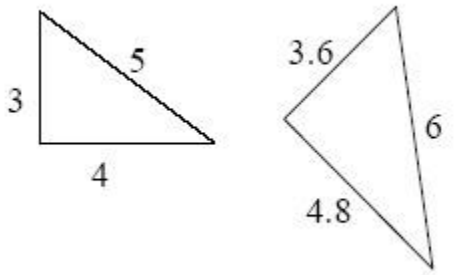
b.



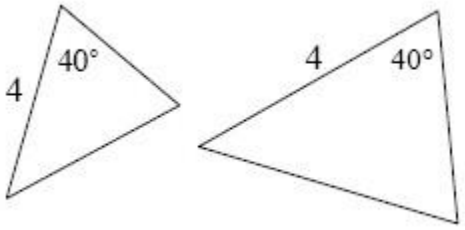
3-72. Explain how you know that the shapes below are similar.



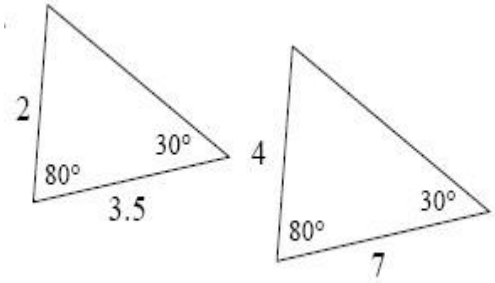
3-89. Determine which similarity conjectures (AA ~, SSS ~, or SAS ~) could be used to establish that the following pairs of triangles are similar. List as many as you can.



a.



c.



b.

3-91. On graph paper, sketch a rectangle with side lengths of 15 units and 9 units. Shrink the rectangle by a zoom factor of $\frac{1}{3}$. Make a table showing the area and perimeter of both rectangles.