## Explore Triangle Congruence Worksheets (SSS)

 $\triangle ABC$  is located below. Copy the sides of the triangle to create  $\triangle A'B'C'$ . Use your compass to determine the sides of  $\triangle A'B'C$ . Leave all construction marks as evidence of your work.

Try to draw different triangles with the same side lengths as  $\triangle ABC$ . Are the triangles identical? Did the condition of Side-Side (SSS) determine a unique triangle?



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The condition on  $\triangle A'B'C'$  is the three side lengths. All of the triangles are identical; the condition determined a unique triangle. After drawing the longest side length, I used the compass to locate the third vertex of the triangle by drawing two circles, one with a radius of the smallest side length and the other with a radius of the medium side length. Each circle was centered at one end of the longest side length. Two possible locations were determined by the intersections of the circles, but both determined the same triangle. One is just a flipped version of the other. The three sides condition determined a unique triangle.

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