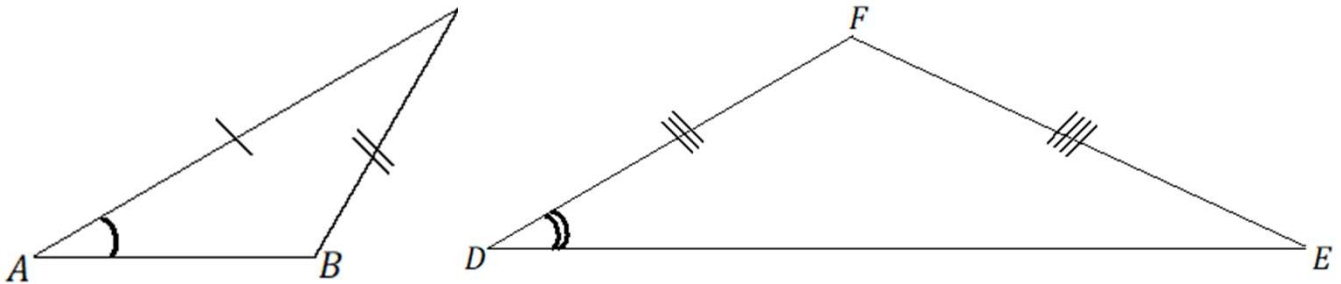


## Explore Triangle Congruence Worksheets (SSA)

Sometimes two sides and a non-included angle of a triangle determine a unique triangle, even if the angle is acute. In the following two triangles, copy the marked information (i.e., two sides and a non-included acute angle), and discover which determines a unique triangle. Measure and label the marked parts.

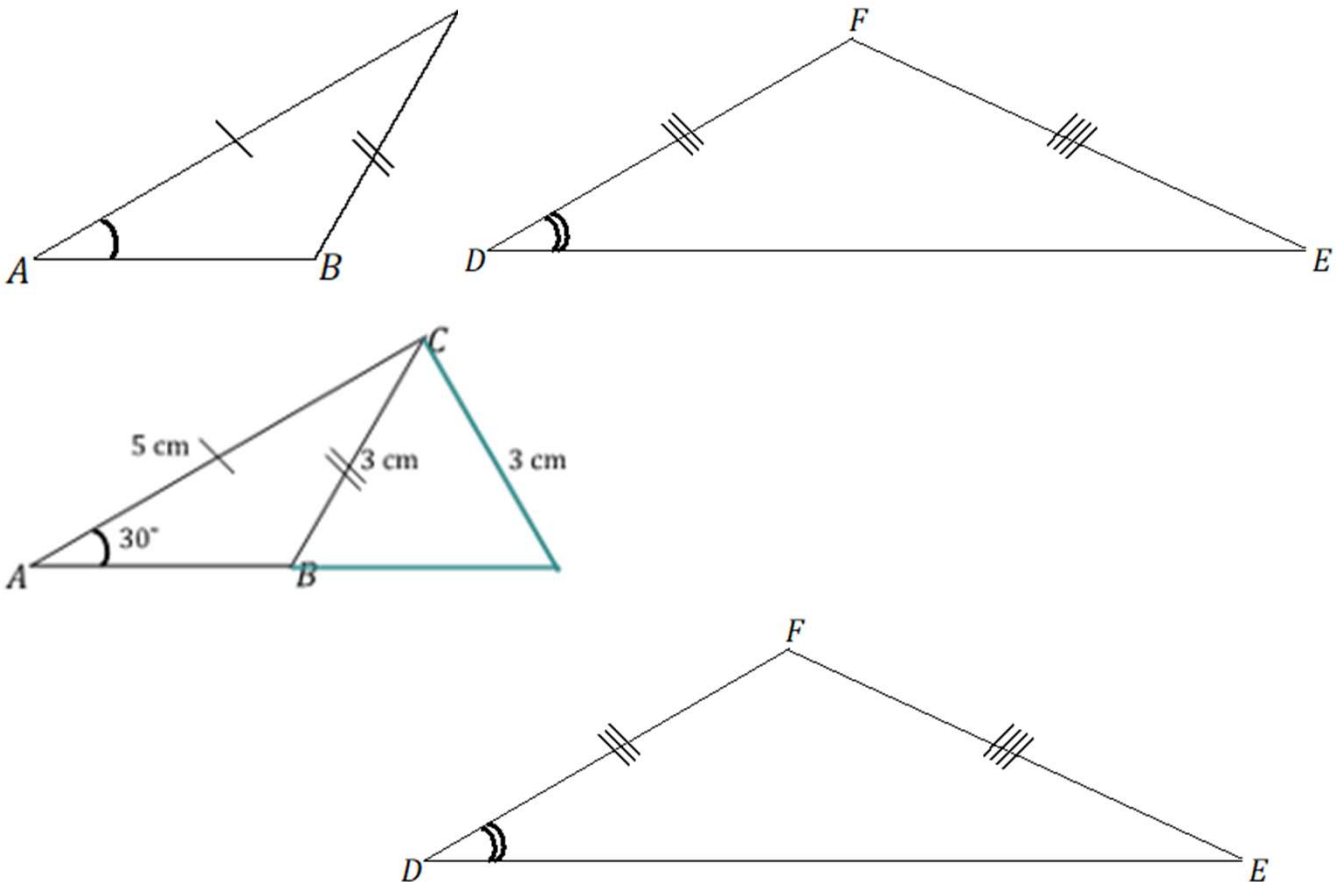
In each triangle, how does the length of the marked side adjacent to the marked angle compare with the length of the side opposite the marked angle? Based on your drawings, specifically state when the two sides and acute non-included angle condition determines a unique triangle.



## Explore Triangle Congruence Worksheets (SSA)

Sometimes two sides and a non-included angle of a triangle determine a unique triangle, even if the angle is acute. In the following two triangles, copy the marked information (i.e., two sides and a non-included acute angle), and discover which determines a unique triangle. Measure and label the marked parts.

In each triangle, how does the length of the marked side adjacent to the marked angle compare with the length of the side opposite the marked angle? Based on your drawings, specifically state when the two sides and acute non-included angle condition determines a unique triangle.



While redrawing  $\triangle ABC$ , students will see that a unique triangle is not determined, but in redrawing  $\triangle DEF$ , a unique triangle is determined. In  $\triangle ABC$ , the length of the side opposite the angle is shorter than the side adjacent to the angle. However, in  $\triangle DEF$ , the side opposite the angle is longer than the side adjacent to the angle.

The two sides and acute non-included angle condition determines a unique triangle if the side opposite the angle is longer than the side adjacent to the angle.

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