Angle-Angle Similarity Lab

Draw two non-congruent triangles with a protractor and a ruler so that each has a 40° and 60° angle.
1. Measure the third angle
2. Measure the lengths of the sides of the triangles
3. Compute the ratios of the lengths of the corresponding sides

A •————————————• B A' •————————————————————————• B'

Measurement	Triangle ABC	Triangle A'B'C'	Ratio
m∠A	40°	40°	$\dfrac{m\angle A'}{m\angle A}=$
m∠B	60°	60°	$\dfrac{m\angle B'}{m\angle B}=$
m∠C			$\dfrac{m\angle C'}{m\angle C}=$
AB			$\dfrac{A'B'}{AB}=$
BC			$\dfrac{B'C'}{BC}=$
CA			$\dfrac{C'A'}{CA}=$

Complete the Conjecture

If two angles of one triangle are congruent to two angles of another triangle then the triangles are _____.

Side-Angle-Side Similarity Lab

Complete the triangles and measure the sides and angles.
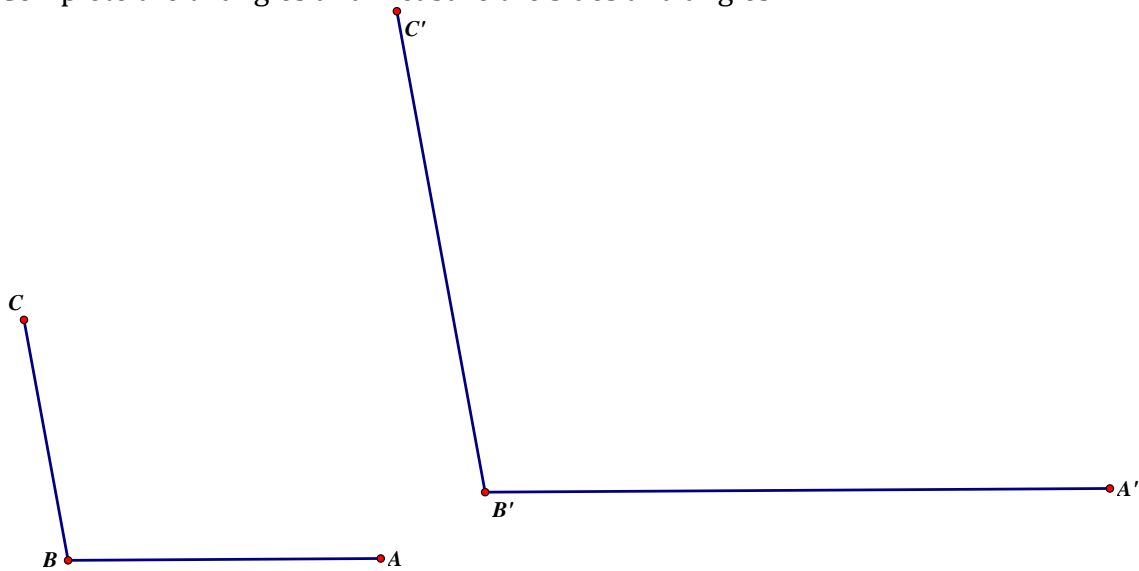
Measurement	Triangle ABC	Triangle A'B'C'	Ratio
m∠A			$\dfrac{m\angle A'}{m\angle A}=$
m∠B	100°	100°	$\dfrac{m\angle B'}{m\angle B}=$
m∠C			$\dfrac{m\angle C'}{m\angle C}=$
AB	4 cm	8 cm	$\dfrac{A'B'}{AB}=2$
BC	3 cm	6 cm	$\dfrac{B'C'}{BC}=2$
CA			$\dfrac{C'A'}{CA}=$

Complete the Conjecture
If two sides of one triangle are proportional to two sides of another triangle and their included angles are congruent then the triangles are _____.