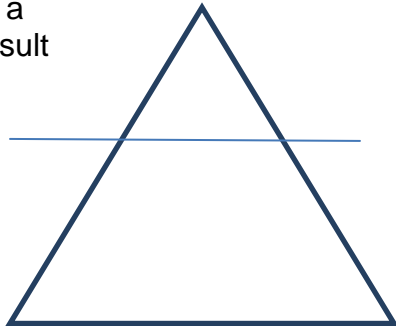


## Core Content

<b>Cluster Title: Prove theorems involving similarity.</b>
<b>Standard G.SRT.4:</b> Prove theorems about triangles. (Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.)
<b>Concepts and Skills to Master</b>
<ul style="list-style-type: none"> <li>• Prove that a line constructed parallel to one side of a triangle intersecting the other two sides of the triangle divides the intersected sides proportionally.</li> <li>• Prove that a line that divides two sides of a triangle proportionally is parallel to the third side.</li> <li>• Prove that if three sides of one triangle are proportional to the corresponding sides of another triangle, the triangles are similar.</li> <li>• Prove the Pythagorean Theorem using similarity.</li> </ul>

## Supports for Teachers

<b>Critical Background Knowledge</b>	
<ul style="list-style-type: none"> <li>• Understand the AA criterion for similar triangles (II.G.SRT.3).</li> </ul>	
<b>Academic Vocabulary</b>	
parallel lines, Pythagorean Theorem, similarity, similar triangles	
<b>Suggested Instructional Strategies</b>	<b>Resources</b>
<ul style="list-style-type: none"> <li>• Explore and recreate a variety of historical proofs about triangles.</li> </ul>	
<b>Sample Formative Assessment Tasks</b>	
<p><b>Skill-Based Task:</b> A triangle is intersected by a segment. Prove that the result is a proportional division of the sides.</p> 	<p><b>Problem Task:</b> Prove the Pythagorean Theorem using similarity.</p>

## Core Content

<b>Cluster Title: Prove theorems involving similarity.</b>
<b>Standard G.SRT.5:</b> Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
<b>Concepts and Skills to Master</b>
<ul style="list-style-type: none"> <li>Find lengths of measures of sides and angles of congruent and similar triangles.</li> <li>Solve problems in context involving sides or angles of congruent or similar triangles.</li> <li>Prove conjectures about congruence or similarity in geometric figures using congruence and similarity criteria.</li> </ul>

## Supports for Teachers

<b>Critical Background Knowledge</b>	
<ul style="list-style-type: none"> <li>Identify corresponding parts of triangles.</li> </ul>	
<b>Academic Vocabulary</b>	
congruence, similarity, congruent triangles, similar triangles, corresponding angles, corresponding sides.	
<b>Suggested Instructional Strategies</b>	<b>Resources</b>
<ul style="list-style-type: none"> <li>Measure object indirectly by using shadows formed on level ground.</li> <li>Solve puzzles involving finding the measures of missing sides or angles in artistic drawings using similar or congruent triangles.</li> </ul>	
<b>Sample Formative Assessment Tasks</b>	
<p><b>Skill-Based Task:</b> Prove that the base angles of an isosceles triangle are congruent.</p>	<p><b>Problem Task:</b> The length of George Washington's face at Mt. Rushmore is 60 feet. Describe a method for determining the length of his nose using similar triangles. Justify your reasoning.</p> 