

Common Core Standards - Resource Page

The resources below have been created to assist teachers' understanding and to aid instruction of this standard.

Domain	Standard: G.SRT.6 - Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
<p><u>Similarity, Right Triangles, and Trigonometry</u> Define trigonometric ratios and solve problems involving right triangles</p>	<p><u>Questions to Focus Learning</u> How do the ratios of the side lengths of right triangles relate to the angles in the triangle?</p> <p>The angles in right triangles are related to the ratios of the side lengths.</p> <p><u>Student Friendly Objectives</u></p> <p><i>Knowledge Targets</i></p> <p>I know that similar triangles have corresponding sides that are proportional and corresponding angles that are congruent. I can understand that similarity in right triangles, leads to proportional relationships which produce the trigonometric ratios for the acute angles in the right triangle. I know the definitions of cosine, sine, and tangent functions.</p> <p><i>Reasoning Targets</i></p> <p>I can recognize the special right triangle relationships of the 30-60-90 and 45-45-90 triangles. I can calculate unknown sides of special right triangles.</p> <p><u>Vocabulary</u></p> <p>adjacent corresponding sides cosine hypotenuse opposite sine tangent trigonometric ratio</p>

Teacher Tips

Vertical Progression

G.SRT.7 - Explain and use the relationship between the sine and cosine of complementary angles.

G.SRT.8 - Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

*(Modeling Standard)

G.SRT.9 - Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.

G.SRT.10 - Prove the Laws of Sines and Cosines and use them to solve problems.

G.SRT.11 - Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

The above information and more can be accessed for free on the [Wiki-Teacher](#) website.

Direct link for this standard: [G.SRT.6](#)