

Clarity for Learning	
Standard KY.HS.G.12 Define trigonometric ratios and use right triangles to solve problems.	
Concepts (Nouns) similar right triangle complementary angles Sine (sin) Cosine (cos) Tangent (tan) Pythagorean Theorem	Skills (Verbs) solve evaluate compare
Learning Progressions <i>Prerequisites:</i> <ul style="list-style-type: none"> ratio and proportions Pythagorean Theorem similar triangles <i>Grade level skills:</i> <ul style="list-style-type: none"> Understand the properties of right triangles. 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 (sine, cosine, and tangent). Explain and use the relationship between the sine and cosine of complementary angles. Derive and calculate sine, cosine, and tangent ratios. Find the relationship between complementary angles and their trig ratios. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. ★ <i>Clarifications:</i> Students will understand that similar triangles have equivalent trigonometric ratios for corresponding angles. Students will see the relationship between sine and cosine of complementary angles. Students will model scenarios where trig ratios can be used to measure objects with indirect measurement.	
Learning Intentions (I am learning to...)	Success Criteria (I know I'm successful when...)

Solve problems using trigonometric ratios.

- I can define and calculate sine, cosine, and tangent ratios.
- I can solve problems using trigonometric ratios.