

Teacher / Team Name: Geometry Regular

Topic: Unit 8: Right Triangles and Trigonometry (REG)

Days: 12

Subject(s): Math

Grade(s): 9th, 10th, 11th, 12th

Know:

Understand:

Do:

<p>Key Vocabulary</p> <p>Pythagorean Theorem</p> <p>Special Right Triangles</p> <p>Trigonometric Ratios</p>	<p>Right triangle properties will be used to find angle measures and side lengths.</p>	<p>Find geometric means</p> <p>Solve problems involving relationships between parts of a right triangle and the altitude to its hypotenuse</p> <p>Use pythagorean theorem and its converse</p> <p>Use properties of 45-45-90 and 30-60-90 triangles</p> <p>Use trigonometric ratios with right triangles to find angle measures</p> <p>Solve problems involving angles of elevation and depression</p> <p>Find the magnitude and direction of vectors</p> <p>Add and subtract vectors</p>
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Which standards are students learning in this unit?

LA.1112.1.6.1: The student will use new vocabulary that is introduced and taught directly;

MA.912.T.2.1: Define and use the trigonometric ratios (sine, cosine, tangent, cotangent, secant, cosecant) in terms of angles of right triangles.

MA.912.G.4.1: Classify, construct, and describe triangles that are right, acute, obtuse, scalene, isosceles, equilateral, and equiangular.

MA.912.G.5.1: Prove and apply the Pythagorean Theorem and its converse.

MA.912.G.5.2: State and apply the relationships that exist when the altitude is drawn to the hypotenuse of a right triangle.

MA.912.G.5.3: Use special right triangles ( $30^\circ - 60^\circ - 90^\circ$  and  $45^\circ - 45^\circ - 90^\circ$ ) to solve problems.

MA.912.G.5.4: Solve real-world problems involving right triangles.

MA.912.G.8.4: Make conjectures with justifications about geometric ideas. Distinguish between information that supports a conjecture and the proof of a conjecture.