**Ch. 10 Right Triangles and Trigonometry**

**Essential Questions:**

* What properties do all triangles share and how are triangles classified?
* What is the Pythagorean Theorem and when is it useful?

**10.1 Simplifying Square Roots (G- SRT.8)**

* I can determine whether an expression is in its simplest radical form and explain the process used in forming my decision.
* I can simplify radical expressions.
* I can use the Pythagorean Theorem to solve for missing measures in right triangles.

**10.2 45-45-90 Triangles (G- SRT.6)**

* I can determine the side lengths of 45-45-90 triangles.
* I can classify a triangle as isosceles and also identify the legs and hypotenuse.
* I can classify a triangle as a 45-45-90 using the Triangle Sum Theorem or Base Angles Theorem.
* I can use the relationship of this triangle to solve for unknown measures.

**10.3 30-60-90 Triangles (G-SRT.6)**

* I can determine the side lengths of 30-60-90 Triangles.
* I can identify the similarities and differences between two special right triangles.
* I can use the relationship of this triangle to solve for unknown measures.

**10.4 Tangent Ratio (G-SRT.8)**

* I can determine the tangent of an acute angle and can write my answer as a fraction and a decimal.
* I can use the "tan" function on a calculator to approximate the tangent of an angle.
* I can solve real-world problems by drawing a right triangle using tangent to solve for unknown measures.

**10.5 Sine and Cosine Ratios (G-SRT.7 and G-SRT.8)**

* I can determine the sine and cosine of an acute angle and can write my answer as a fraction and decimal.
* I can use the "sin" and "cos" function on a calculator to approximate the missing angle.
* I can solve real-world problems by drawing a right triangle using sine or cosine to solve for unknown measures.

**10.6 Solving Right Triangles (G-SRT.8)**

* I can use sine, cosine, tangent, and their inverses to solve for the unknown side lengths and angle measures of a right triangle.
* I can draw right triangles that describe real-world problems, label the sides and angles with their given measures, and solve for any unknown measures.