

### Vocabulary

geometric mean	the positive square root of the product of two numbers
trigonometric ratio	a ratio of two sides of a right triangle
angle of elevation	the angle formed by a horizontal line and a line of sight to a point above the line
angle of depression	the angle formed by a horizontal line and a line of sight to a point below the line

### Theorems & Postulates

theorem 8-1-1	the altitude to the hypotenuse of a right triangle forms two triangles that are similar to each other and to the original triangle
the law of sines	for any triangle ABC with side lengths a, b, and c, $\sin A/a = \sin B/b = \sin C/c$
the law of cosines	for any triangle ABC with side lengths a, b, and c, $a^2 = b^2 + c^2 - 2bc \cos A$ , $b^2 = a^2 + c^2 - 2ac \cos B$ , and $c^2 = a^2 + b^2 - 2ab \cos C$

### Trigonometric Ratios (SOHCAHTOA)

sine	the ratio of the length of the leg opposite the angle to the length of the hypotenuse	$\sin = \text{opposite/hypotenuse}$
cosine	the ratio of the length of the leg adjacent to the angle to the length of the hypotenuse	$\cos = \text{adjacent/hypotenuse}$
tangent	the ratio of the length of the leg opposite the angle to the length of the leg adjacent to the angle	$\tan = \text{opposite/adjacent}$

