

Trigonometric Functions Learning Materials

1. Basic Trigonometric Functions

- In a right triangle, the trigonometric functions relate the angles to the ratios of the sides.
- **Sine (sin):** Opposite / Hypotenuse
- **Cosine (cos):** Adjacent / Hypotenuse
- **Tangent (tan):** Opposite / Adjacent

2. Reciprocal Trigonometric Functions

- **Cosecant (csc):** $1 / \sin$
- **Secant (sec):** $1 / \cos$
- **Cotangent (cot):** $1 / \tan$

3. Unit Circle

- The unit circle is a circle with radius 1, used to define trigonometric functions for any angle.

4. Trigonometric Identities

- Equations that are true for all values of the variables.
- Examples:
 - $\sin^2(x) + \cos^2(x) = 1$
 - $\tan(x) = \sin(x) / \cos(x)$