

Daily Quiz

- Get into a group of **FOUR PEOPLE**. No more, no less.
- Go to [Socrative.com](https://www.socrative.com)
- Room Name: **HONG5824**
- Enter the last names of everyone (e.g. Smith, Sparks, Bozlee, Pierson)
- Complete the quiz.

Trigonometric Identities Review

Right Angle Trigonometry

$\sin \theta$

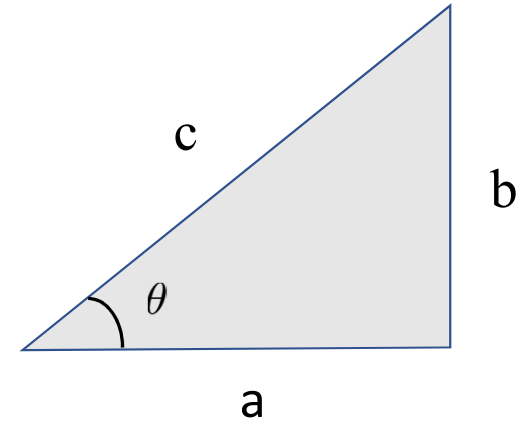
$\csc \theta$

$\cos \theta$

$\sec \theta$

$\tan \theta$

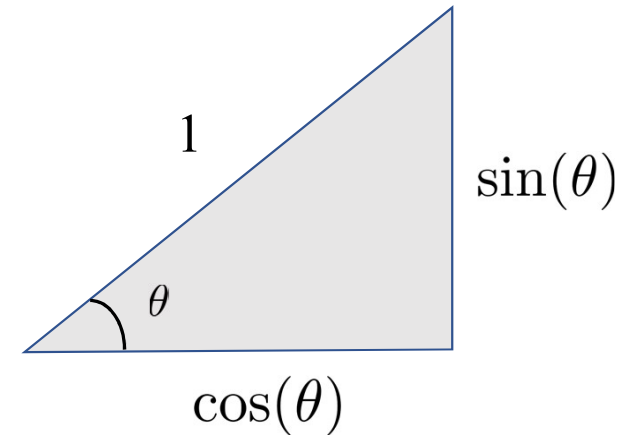
$\cot \theta$



Trigonometric Identities Review

Pythagorean Theorem (3 identities)

1. $\sin^2(\theta) + \cos^2(\theta) = 1$
2. $1 + \tan^2(\theta) = \sec^2(\theta)$
3. $1 + \cot^2(\theta) = \csc^2(\theta)$



Trigonometric Identities Review

Double Angle Formulas

$$\sin(2\theta) = 2 \sin \theta \cos \theta$$

$$\cos(2\theta) = \cos^2 \theta - \sin^2 \theta$$

Half Angle Formulas

$$\sin^2 \theta = \frac{1 - \cos(2\theta)}{2}$$

$$\cos^2 \theta = \frac{1 + \cos(2\theta)}{2}$$

5.7 Trigonometric Integrals

An integral with an odd power of $\cos x$ Evaluate $\int \cos^3 x \, dx$.

5.7 Trigonometric Integrals

An integral with an even power of $\sin x$ Evaluate $\int_0^\pi \sin^2 x \, dx$.

5.7 Trigonometric Integrals

$$\int \sin^3 x \cos^2 x \, dx$$

5.7 Trigonometric Integrals

$$\int \tan^3 x \sec x \, dx$$

5.7 Trigonometric Integrals

$$\int_0^{\pi/4} \tan^2 x \sec^4 x \, dx$$

5.7 Trigonometric Integrals

$$\int \sec^3(x) dx$$

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