



### Symmetry and Periodicity in Trigonometric Functions

#### Today's Standard

HSF.TF.A4 - (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.

#### Real-World Applications for this Standard

Modeling sound waves; Engineering signal processing; Predicting tidal patterns; Designing rotating machinery; Analyzing seasonal weather patterns

#### Today I Learned

Today, we learned about the unit circle and how it helps us understand trigonometric functions. These functions are important for math and science.

#### Common Stumbling Blocks

Some students think all trigonometric functions are the same, but they aren't. For example, sine is different from cosine. Another mistake is thinking they all repeat the same way, but they don't.

#### Quiz Me

- What is a unit circle?
- Is sine an odd or even function?
- What is the period of cosine?
- Can you name a real-world use of trigonometric functions?
- What does periodicity mean?

#### Help Me

Trigonometric functions help us understand things that repeat, like sound waves and tides. By using the unit circle, we can see how these functions work and solve real-world problems.