

# Calculus 1 Formulas

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# 1 Trigonometric Identities

## Theorem 1 (Pythagorean Identity)

- $\cos^2 \theta + \sin^2 \theta = 1$
- $\sec^2 \theta - \tan^2 \theta = 1$

## Theorem 2 (Range)

- $-1 \leq \cos \theta \leq 1$
- $-1 \leq \sin \theta \leq 1$

## Theorem 3 (Periodicity)

- $\cos(\theta \pm 2\pi) = \cos \theta$
- $\sin(\theta \pm 2\pi) = \sin \theta$

## Theorem 4 (Symmetry)

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