



# Trigonometry

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Source	Author(s) (Text or Video)	Title(s)	Link (where applicable)
OpenStax	Jay Abramson, Arizona State University	Precalculus	<a href="#">OpenStax</a>
Mathispower4u	James Sousa		<a href="#">Mathispower4u Videos</a>

Knewton Trigonometry was developed to meet the scope and sequence of a typical one semester trigonometry course. To develop the course, Knewton used three main sources of content: Openstax, videos created by a Math Professor we have partnered with, and a team of Subject Matter Experts (SMEs). The SMEs come from diverse backgrounds and are all accomplished academics in the field of Trigonometry.

Knewton Trigonometry has two instructional sequences for every learning objective, giving students multiple opportunities to learn new concepts. Between our OpenStax, Video, and Knewton SMEs, we were able to solicit ideas from math instructors and students at all levels of higher education. Knewton Trigonometry covers the typical breadth of trigonometry topics and also provides the necessary depth to ensure the course is manageable and engaging for instructors and students alike.

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## Trigonometry | Table of Contents

### Chapter 1: Right Triangle Trigonometry

#### Right Triangle Trigonometry and Trigonometric Ratios

- The Six Trigonometric Ratios
  - Use right triangles to evaluate sin, cos, and tan functions
  - Evaluate reciprocal trig functions using right triangles or a sin, cos, or tan function
  - Evaluate trigonometric functions of angles not in standard position
- Use Right Triangle Trigonometry in Solving Problems
  - Find missing side lengths using trig ratios
  - Use right triangle trigonometry to solve applied problems

### Chapter 2: Radian Measure and the Unit Circle

#### Angles as Rotations and Arc Length

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  - Evaluate composite functions with inverse trigonometric functions in the form  $f^{-1}(f(x))$  or  $f^{-1}(g(x))$

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    - Convert from rectangular coordinates to polar coordinates
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    - Write a polar equation in cartesian form
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    - Graph trigonometric parametric equations by plotting points
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