

Material Covered

- Angle Measure
- Circles and Triangles
- Sectors and arc length
- Trigonometric Functions
- Inverse Trigonometric Functions
- The Fundamental Identity
- Graphs of sine and cosine

Textbook Reference

- Chapter 1 (everything except 1.3)
- Chapter 2, sections 1 and 2.

Important Concepts

- Measuring an angle
 - In degrees, minutes, seconds, and radians.
 - The standard angle
 - The reference angle
 - Relationship to sectors and arc length
- Trigonometric Functions
 - On a triangle
 - In a circle
 - Inverses
- The Fundamental Identity
- Graphs of sine and cosine
 - Typical shape
 - Changes in period, amplitude, phase, or vertical shift.

Important Skills

- Be able to identify and measure an angle.
- Be able to find any one of these on a sector, given the other two: arc length, angle, radius.
- Be able to find any one of these on a sector, given the other two: area, angle, radius.
- Be able to find the value of any trigonometric function on a triangle without a calculator.
- Be able to find the value of any trigonometric function at angles that are multiples of 30° or 45° without a calculator.
- Be able to find the value of any trigonometric function at any angle with a calculator.
- Be able to find the coordinates of any point on a circle. (With and without a calculator, as above)
- Be able to find an angle, given appropriate information about a triangle or circle. (With and without a calculator, as above)
 - Identify when there are multiple answers, and when there is just one. (And in the latter case find that one answer, of course)
- Be able to identify and apply the fundamental identity when needed.
- Be able to graph any sine function.
- Be able to graph any cosine function.
- Be able to construct an equation given a graph of a sine or cosine function.
- Be able to translate word problems into mathematics: that is, draw either a picture or diagram and construct one or more equations.