MATH1060: Midterm 2 Study Guide

The following is an overview of the material that will be covered on the first exam.

§4.6 Graphs of Other Trigonometric Functions

- Graphins $\tan x$, $\cot x$, $\sec x$, $\csc x$, and variations thereof.
- The period, domain, and range of the above functions.

§4.7 Inverse Trigonometric Functions

- The definition of $\sin^{-1}$, $\cos^{-1}$, and $\tan^{-1}$.
- Computing values of arcsin, arccos, and arctan for standard angles.
- Graphing inverse trig functions.

§4.1 Angular and Linear Velocity

- The definition of linear and angular velocity.
- The relationship between the two (i.e., $v = r\omega$).
- Solving problems with linear/angular velocity.

§4.8 Applications and Models

- Using the standard trigonometric functions (and their inverses) to solve a right triangle.
- Using the standard trigonometric functions (and their inverses) to find directions in terms of bearings.
- Using the standard trigonometric functions (and their inverses) to solve harmonic motion problems.
- Using the standard trigonometric functions (and their inverses) to solve other word problems.

§5.1 Using Fundamental Identities

- Using fundamental identities to evaluate a function.
- Using fundamental identities to simplify an expression.
- Factoring trigonometric expressions.
- Rewriting expressions using a common denominator.
- Rewriting expressions without fractions.
- Using trigonometric substitution to simplify an expression.
- Rewriting a logarithmic expression.

§5.2 Verifying Trigonometric Identities

- Be able to verify trig expressions/identities.