## Math 11022 Final Exam Review List

The Final Exam consists of **22 short-answer questions** and **10 long-answer and graphing** problems.

***Short-answer*** problems can be done in a few steps.

Some examples are:

1. Find the exact value in radians: 

2. If and , in what quadrant does  terminate?

3. Determine the period (or amplitude, or phase shift) for the function 

Other examples could include questions on domain/range, fundamental identities, the unit circle, triangle notation, vector notation

For the ***long-answer*** and ***graphing*** problems, work must be shown and complete solutions given.

Some examples are:

1. Sketch the graph of the function  over a two-period interval. Identify the amplitude, period, and

phase shift. Label any key points.

2. Find all exact real solutions, in radians: 

3. Verify the identity: 

In general, expect

2 - 3 graphs: 1 sine, 1 cosine, 1 other

1 – 2 identities to verify

1 – 2 trig equations to solve

1 – 2 Right triangle applications

1 Law of Sines/Law of Cosines application

1 – 2 Vector questions

The final exam will cover the sections from the ebook which are listed. A sampling of exercises from the chapter reviews and chapter tests is included for practice. (In our MLP course, choose Chapter Contents, then Chapter 6 (or 7 or 8). Under eText Resources, choose View the Review Exercises or View the Chapter Test. Answers can be found starting on p. A-41 in the eBook.)

**Chapter 6: The Trigonometric Functions** - Sections 6.1 – 6.6

***Important***: Know the unit circle

Be able to graph Trig functions and transformations without a calculator

Given the graph, be able to write the equation for a Trig function

## p. 578 – Chapter 6 Review

7, 8, 27, 32, 39, 43, 54, 57, 70, 71, 72, 74, 79, 84

## p. 581 – Chapter 6 Test

1, 14, 16, 19, 20, 21, 22, 24

## Chapter 7: Trigonometric Identities, Inverse Functions, and Equations - Sections 7.1 – 7.5

***Important***: Know the identities: Basic, Pythagorean, Sum & Difference, Cofunction, Double-Angle, Half-Angle

Know the domains and ranges for 

## p. 645 – Chapter 7 Review

1, 3, 10, 13, 20, 25, 32, 34, 38, 41, 44, 47, 48, 53, 55, 57, 59, 62, 63, 69, 70

## p. 648 – Chapter 7 Test

7, 9, 19, 20, 24, 26

## Chapter 8: Applications of Trigonometry - Sections 8.1, 8.2, 8.5, 8.6

***Important***: Know the equations for the Law of Sines and Law of Cosines

Know vector notation, operations with vectors

## p. 731 – Chapter 8 Review

1, 7, 8, 11, 65, 68, 71, 73, 75, 78, 79, 80, 81, 82, 84, 88, 89, 91, 92

## p. 735 – Chapter 8 Test

2, 3, 5, 16, 17, 18