Final Exam Assessment Objectives

On the final exam, the student will demonstrate the ability to:

RADICAL FUNCTIONS *(2 Questions)*
Determine the properties of a radical function in standard form. (transformations)
Find the x and y intercepts of a radical function.
Find the range and domain of a radical function.
Find the point of origin of a radical function
Graph a radical function.

EXPONENTIAL FUNCTIONS *(2 Questions)*
Determine the properties of an exponential function in standard form.*(transformations)*
Determine whether a function demonstrates exponential growth or decay.
Find the range and domain of an exponential function.
Find the key point of an exponential function.
Graph an exponential function.

LOGARITHMS AND LOGARITHMIC FUNCTIONS *(10 Questions)*
Evaluate a simple logarithm.
Convert a logarithm to exponential form and vice-a-versa.
Use the properties of logs to write a single log as the sum or difference of logs.
Use the properties of logs to condense the sum or difference of logs into a single log.
Solve exponential equations using logarithms.
Solve exponential equations using the one-to-one property.
Solve logarithmic equations
Determine the properties of a logarithmic function in standard form.(transformations)
Find the x and y intercepts of a logarithmic function.
Find the range and domain of a logarithmic function.
Find the key point of a logarithmic function.
Graph a logarithmic function.

TRIGONOMETRY *(17 Questions)*
Give a graphical representation of any angle
Find positive and negative coterminal angles
Convert an angle measured in degrees to radians
Convert an angle measured in radians to degrees
Evaluate the basic trigonometric functions
Use reference angles to evaluate the basic trigonometric functions
Use the unit circle to evaluate basic trigonometric functions
Use the unit circle to evaluate periodic trigonometric functions
Use the unit circle to solve trigonometric equations
Find the length of an arc subtended by a central angle of a circle
Find the Amplitude, Period and Phase Shifts of the graph of trigonometric functions
Find the midline of the graph of a trigonometric function
Graph the 6 basic trigonometric functions: *(sine, cosine, tangent, cosecant, secant and cotangent.)*

INVERSE FUNCTIONS *(2 Questions)*
Find the inverse of a function
Verify two functions, f(x) and g(x), are inverses of each other.

FUNCTIONS *(3 Questions)*
Graph transformations of functions
Determine the range and domain of a function
Determine whether a function is even, odd or neither
Find the average rate of change

CONICS *(1 Question)*
Graph a parabola that opens sideways

PROBABILITY / STATISTICS *(5 Questions)*
Determine the mean, median and mode of a data set
Use standard deviation to measure distribution of data
Determine whether to use an experiment, observational study or survey to collect data
Evaluate basic probabilities using the fundamental counting principle

VOLUME *(3 Questions)*
Determine which 3 dimensional shape is created when an geometric shape is rotated about an axis
Find the volume of a box
Find the volume of a cylinder