

Math 3 Final Exam Study Guide

Be able to recognize or write the equation of a line, circle, hyperbola, ellipse or parabola.

If given a graph, be able to graph a transformation (horizontal, vertical, or reflection).

Find the inverse of a function

Solve a variation problem (direct, inverse, jointly or combination)

Use remainder theorem and know how to do synthetic division

Use Descartes' rule of signs to determine the number of possible solutions.

Use theory of conjugate pairs to find all solutions.

Be able to solve and graph an exponential and logarithmic equation.

Be able to solve compound interest application problems.

Be able to solve systems of equations containing two or three variables by substitution, addition, graphing and matrix methods including Cramer's rule.

Find a parabola using three points.

Solve and graph systems that contain nonlinear equations.

Matrices: Do all operations, find determinates, find inverses, solve equations using inverse matrices.

Use Guassian elimination to solve a system.

Be able to write complete binomial expansions using appropriate formula.

Be able to write the n th term for an arithmetic or geometric sequence. Be able to find the sum of a finite or infinite arithmetic or geometric series using the appropriate formulas.

Use summation notation. Find the common difference or ratio of a series. Find the mean of a series.

Be able to solve permutation application problems.

Be able to do operations on functions and find compositions of functions.

Use rules of logarithms to rewrite equations.

Solve application problems involving: rate/time/distance, interest/money/investment, mixture, work/time & geometry.

Write equations of lines given certain conditions (parallel, slope, intercept, perpendicular)

Be able to solve inequalities.

These are the major topics. Just because something may be missing does not mean its not on the test. Everything that we have covered is fair use for the exam. Study your tickets out the door and exams. Try the practice exams on MathXL.