

Math 90 Sequence of Topics

REVIEW

R6 Rational Expressions and Equations

FUNCTIONS AND GRAPHS

7.1 Introduction to Functions

7.2 Domain and Range

7.3 Graphs of Functions

Supplement 2.5 Transformations

7.4 & 7.5 The Algebra of Functions along with Formulas, Applications and Variations

SYSTEMS OF LINEAR EQUATIONS AND PROBLEM SOLVING

8.1&8.2 Systems of Linear Equations (Introduction and Solving by Substitution and Elimination)

8.3 Solving Applications Involving Systems of Equations

8.4 Systems of Equations in Three Variables

8.5 Applications of Systems with Three Variables

TEST 1

8.6 Elimination Using Matrices

8.7 Determinants and Cramer's Rule

INEQUALITIES AND PROBLEM SOLVING

9.1&9.2 Inequalities, Applications, Intersections, Unions and Compound Inequalities

9.3&9.4 Absolute Value Equations and Inequalities – Inequalities in Two Variables

EXPONENTS AND RADICALS

10.1&10.2 Radical Expressions and Functions and Rational Numbers as Exponents

10.3 Multiplying Radical Expressions

10.4 Dividing Radical Expressions

10.5 Expressions Containing Several Radical Terms

10.6 Solving Radical Equations

10.7 Distance Formula, Midpoint Formula, Special Triangles

10.8 The Complex Numbers

QUADRATIC FUNCTIONS AND THEIR EQUATIONS

11.1 Quadratic Equations

11.2&11.3 The Quadratic Formula and Studying Solutions of Quadratic Equations

TEST 2

11.4 Applications Involving Quadratic Equations

11.5 Equations Reducible to Quadratic

11.6 Quadratic Functions and Their Graphs

11.7 More About Graphing Quadratic Equations $f(x)=ax^2+bx+c$

11.8 Problem Solving and Quadratic Functions – Max and Min

11.9 Polynomial Inequalities and Rational Inequalities

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

12.1 Composite Functions and Inverse Functions

12.2 Exponential Functions

12.3 Logarithmic Functions

12.5 Common Logarithms and Natural Logarithms

TEST 3

12.4 Properties of Logarithmic Functions

12.6 Solving Exponential and Logarithmic Functions

12.7 Applications of Exponential and Logarithmic Functions

CONIC SECTIONS

13.1 Parabolas and Circles

13.2 Ellipses

13.3 Hyperbolas

SEQUENCES, SERIES, THE BINOMIAL THEOREM AND PROBABILITY

14.1 Sequences and Series

14.2 Arithmetic Sequences and Series

14.3 Geometric Sequences and Series

QUADRATIC FUNCTIONS AND EQUATIONS

Supplement 8.5 Combinatorics: Permutations

TEST 4

Supplement 8.6 Combinatorics: Combinations

14.4 The Binomial Theorem

Supplement 8.8 Probability

CUMULATIVE FINAL EXAM