

Math 99 Topics

Chapter 7: Equations of Lines; Functions

- Review of graphing lines, finding slope, intercepts, writing equations of lines, parallel and perpendicular lines - §7.1, 7.2
- Functions - §7.3
 - Determining if a relation is a function (e.g. Vertical Line Test)
 - Domain and Range
 - Function Notation

Chapter 8: Systems of Linear Equations

- Determining if an ordered pair is a solution to a system of linear equations - §8.1
- Solving systems of linear eqns. by graphing - §8.1
- Solving systems of linear eqns. by substitution - §8.2
- Solving systems of linear eqns by elimination - §8.3
- Consistent, inconsistent, and dependent systems - §8.1, 8.2, 8.3
- Systems of linear eqns in three variables - §8.4
- Applications of systems of linear eqns. - §8.5
 - Distance = Rate \times Time*
 - Interest = Interest Rate \times Principal*
 - Total Value = Price \times Quantity*
 - Pure Substance = Percent Concentration \times Amount of Solution*

Chapter 2 & 9: Inequalities and Absolute Value

- Interval Notation - §2.8
- Solving linear inequalities using the addition and multiplication property of equality - §2.8
- Solving three-part inequalities - §2.8
- Intersections and unions of sets - §9.1
- Solving compound inequalities - §9.1
- Solving absolute value equations and inequalities - §9.2
- Linear inequalities in two variables - §9.3

Chapter 10: Radical Expressions and Graphs

- Square roots - §10.1
- n th roots (cube root, fourth root, etc.) - §10.1
- Graphs of square roots and cube roots - §10.1

- Rational exponents ($a^{m/n} = \sqrt[n]{a^m} = (\sqrt[n]{a})^m$) - §10.2
- Rules for rational exponents - §10.2
- Simplifying radical expressions using product rule or quotient rule - §10.3
- Simplifying radical expressions by reducing quantity inside radical as much as possible - §10.3
- Pythagorean formula - §10.3
- Distance formula - §10.3
- Adding and subtracting radical expressions - §10.4
- Multiplying and dividing radical expressions - §10.5
- Rationalizing the denominator - §10.5
- Solving equations with radicals (Check your solutions!) - §10.6
- Definition of imaginary number i - §10.7
- Operations with complex numbers - §10.7

Chapter 11: Quadratic Equations, Inequalities, and Functions

- Solving quadratic eqns using the square root property - §11.1
- Completing the square - §11.2
- Quadratic formula - §11.3
- Using the discriminant to determine the number and type of solutions - §11.3
- Solving formulas for variables using squares or square roots - §11.5
- Applications of quadratic equations - §11.5
 - Pythagorean formula
 - Area of rectangles
 - Distance of propelled object from ground
- Graphs of Quadratic functions (Parabolas) - §11.6, 11.7
- Optimization using quadratic equations - §11.7

Chapter 12: Exponential and Logarithmic Functions

- Exponential functions and graphs - §12.2
- Solving an exponential equation - §12.2
- Logarithmic functions and graphs - §12.3
- Common and natural logarithms - §12.5