

Section 1.1 Cartesian Coordinates

Key Topics:

- The Cartesian plane, plotting points, computing distance
- Circles (general equation, finding the center and radius, graphing)

Section 1.2 Lines

Key Topics:

- Slope, x and y -intercepts
- Finding the equation of a line using slope/intercept, or point/slope
- Graphing lines, parallel and perpendicular lines

Section 1.3 Linear Models

Key Topics:

- Cost, Revenue, and Profit functions
- Linear depreciation, finding break-even points
- Finding linear supply and demand functions

Section 1.4 Intersecting Lines

Key Topics:

- Finding the point of intersection of two non-parallel lines
- Finding market equilibrium
- Other applications

Section 9.1-9.3 Algebra Review

Key Topics:

- The laws of exponents, Simplifying expressions involving exponents
- The properties of radicals, simplifying radicals, rationalization
- Polynomials, operations on polynomials, factoring, solving linear and quadratic equations
- Adding, subtracting, multiplying, dividing, and simplifying rational expressions, rationalizing binomial denominators.

Section 9.4 Inequalities and Absolute Value

Key Topics:

- Interval Notation, graphing inequalities on the number line
- Solving linear, quadratic, and fractional inequalities
- The definition and properties of absolute value, absolute value equations and inequalities

Section 10.1 Functions and Graphs

Key Topics:

- The definition of a function; graphing functions; the vertical line test
- The domain and range of a function; increasing, decreasing, and constant intervals of a function
- Piecewise defined functions
- Interpreting the graph of a function

Section 10.2 The Algebra of Functions

Key Topics:

- The sum, difference, product, quotient, and composition of two functions
- Evaluating combinations of functions; finding formulas for combinations of functions
- Decomposing functions, computing difference quotients