

Algebra 1 Challenge Exam Topics

Jesuit High School

- Solve linear equations in one variable
- Solve absolute value equations
- Solve proportions
- Solve and graph linear inequalities in one variable
- Solve and graph compound linear inequalities in one variable
- Solve and graph absolute value inequalities
- Graph functions using a table of values
- Graph linear functions using intercepts, slope-intercept form, point-slope form
- Use slope formula, slope-intercept form, point-slope form to write equations of described lines
- Parallel and perpendicular lines and slopes
- Solve systems of linear equations in two variables by graphing, substitution, elimination, including special systems
- Solve and graph linear inequalities in two variables and systems of linear inequalities in two variables
- Polynomial operations: addition, subtraction, multiplication
- Special products of binomials
- Factor polynomials: GCF, grouping, trinomials, special products
- Solve quadratic equations by graphing, factoring, using square roots, completing the square, quadratic formula
- Rational expressions: simplify, add, subtract, multiply, and divide
- Radical expressions: simplify, add, subtract, multiply, and divide
- Organize and display data using scatterplots, stem-and-leaf plots, histograms, frequency tables, and measures of central tendency
- Experimental and theoretical probability, including independent and dependent events
- Find mean, median and mode of a set of numbers
- Define and identify functions
- Direct and inverse variation