

BCHS Algebra I Proficiency Exam

List of Topics

- Difference between expressions and equations (when to simplify, when to solve)
- Fraction Operations
- PEMDAS
- Percents and Proportions
- Basic Probability (# of outcomes obtained or desired divided by total possible outcomes, $0 \leq P(x) \leq 1$, sample space, $P(\text{sample space}) = 1$)
- Mean, Median, Mode
- Distributive Property
- Combining Like terms
- **Solving multi-step equations and inequalities**, including literal equations
- Exponent Properties
- **Factoring**
- Graphing linear equations and inequalities
- Writing equations for lines (standard, point-slope, and slope-intercept forms)
- **Operations with Polynomials**
- Solving/simplifying quadratics by factoring and quadratic formula
- Solving systems of equations by graphing, substitution, and elimination.
- Parallel and perpendicular lines slopes and equations
- Properties of radicals (we do this in geometry)
- Solving radical equations
- Operations with rational functions
- Simplifying rational expressions, solving rational equations
- Definition of function (vs relation)
- Pythagorean Theorem and distance formula (we do this in geometry, too)
- Absolute value—solve equations, inequalities, and graph
- Application/word problems
- Basic area and perimeter/circumference formulas/ problems—square, rectangle, triangle, circle
- Solving for a variable that's in a formula