



ALGEBRA 1

COMPETENCY EXAM

STUDY GUIDE

This assessment will be used to guarantee that the material taught outside of Piscataway Township Schools has prepared you for the next course you will be taking. Please give this assessment your best effort.

Calculators are not permitted on the exam. The test is set up in two sections: short answer and graphing. Please use the following list of topics to review for the exam.

- Operations with real numbers
- Evaluating expressions
- Using order of operations
- Solving one-variable equations
- Solving multi-step equations
- Translating verbal sentences into algebraic symbols
- Solving absolute value equations
- Solving and graphing simple and compound inequalities
- Solving literal equations
- Graphing linear equations
- Finding intercepts of a line
- Determining slope, domain and range of linear equations
- Graphing linear inequalities
- Writing linear equations given certain information (points, slope, intercepts)
- Graphing absolute value functions
- Properties of exponents
- Properties of parallel and perpendicular lines
- Solving and graphing systems of equations
- Exponential growth and decay functions
- Scientific notation
- Adding, subtracting, and multiplying polynomials
- Factoring polynomials
- Simplifying radicals
- Adding, subtracting, and multiplying radicals
- Solving quadratic equations by factoring and by finding square roots
- Graphing quadratic functions
- Simplifying rational expressions
- Operations with rational expressions
- Solving rational equations

USEFUL ALGEBRA 1 WEB SITES

<http://www.coolmath.com/algebra/index.html>

<http://www.purplemath.com/modules/index.htm>

<http://www.yourteacher.com/algebra-1-tutoring.php>