

ALGEBRA 1: SESSION 1

Course Description

This course is designed to give students the skills and strategies to solve fundamental mathematical problems. This course is the first half of Algebra 1 and covers a range of algebraic topics such as setting up and solving linear equations, graphing, finding linear relations, solving systems of equations, and working with polynomials. More importantly, this course is intended to provide you with a solid foundation for the rest of your math courses. This course will culminate with a Final Exam.

Prerequisite

None

Credit Requirement Area

Math

Learning Objectives

- Students will evaluate order of operations with absolute value.
- Students will distribute and combine like terms.
- Students will evaluate algebraic expressions.
- Students will solve linear equations (simple, dual side variables, infinite or no solution, rational coefficients).
- Students will solve algebraic formulas with several variables for one of the variables.
- Students will solve linear absolute value equations (simple and dual side) problems.
- Students will find the slope of a line from two points or a graph.
- Students will find the equation of a line from a graph, standard form, two points, parallel lines, and perpendicular lines.
- Students will solve, graph, and give interval notation for compound inequalities.
- Students will solve, graph and give interval notation for absolute value inequalities.
- Students will solve a system of equations with 2 variables using graphing, substitution, and elimination (may have infinite or no solutions).
- Students will solve applications of systems of equations including value and mixture problems.
- Students will simplify exponential expressions with positive and/or negative exponents.
- Students will multiply or divide expressions in scientific notation.
- Students will evaluate polynomials for values of the variable.
- Students will combine polynomials (add/subtract).
- Students will distribute and multiply with polynomials (including special products).
- Students will divide polynomials.

Suggested Weekly Schedule

Week	Graded Activities	Suggested Due Date	% Points
1	Assignment 1: Integers Practice	Monday of Week 1	14.2%
	Assignment 2: Fractions Practice	Tuesday of Week 1	14.3%
	Assignment 3: Order of Operations Video Lesson	Wednesday of Week 1	14.3%

Week	Graded Activities	Suggested Due Date	% Points
	Assignment 4: Order of Operations Practice	Wednesday of Week 1	14.3%
	Assignment 5: Properties of Algebra Video Lesson	Thursday of Week 1	14.3%
	Assignment 6: Properties of Algebra Practice	Thursday of Week 1	14.3%
	Assignment 7: Points and Lines Video Lesson	Friday of Week 1	14.3%
Week 1 Total Percentage Towards Final Grade			16.6%
2	Assignment 1: One Step Equations Video Lesson	Monday of Week 2	8.3%
	Assignment 2: One Step Equations Practice	Monday of Week 2	8.3%
	Assignment 3: Two Step Equations Video Lesson	Monday of Week 2	8.3%
	Assignment 4: Two Step Equations Practice	Monday of Week 2	8.3%
	Assignment 5: General Linear Equations Video Lesson	Tuesday of Week 2	8.3%
	Assignment 6: General Equations Practice	Tuesday of Week 2	8.3%
	Assignment 7: Fraction Equations Video Lesson	Wednesday of Week 2	8.3%
	Assignment 8: Fraction Equations Practice	Wednesday of Week 2	8.3%
	Assignment 9: Formulas Video Lesson	Thursday of Week 2	8.4%
	Assignment 10: Formulas Practice	Thursday of Week 2	8.4%
	Assignment 11: Absolute Value Equations Video Lesson	Friday of Week 2	8.4%
	Assignment 12: Absolute Value Equations Practice	Friday of Week 2	8.4%
Week 2 Total Percentage Towards Final Grade			16.6%
3	Assignment 1: Slope Video Lesson	Monday of Week 3	7.7%
	Assignment 2: Slope Practice	Monday of Week 3	7.7%
	Assignment 3: Slope Intercept Video Lesson	Monday of Week 3	7.7%
	Assignment 4: Slope Intercept Practice	Monday of Week 3	7.7%
	Assignment 5: Point Slope Video Lesson	Tuesday of Week 3	7.7%
	Assignment 6: Point Slope Practice	Tuesday of Week 3	7.7%
	Assignment 7: Parallel Perpendicular Video Lesson	Wednesday of Week 3	7.7%
	Assignment 8: Parallel Perpendicular Practice	Wednesday of Week 3	7.7%
	Assignment 9: Inequalities Video Lesson	Thursday of Week 3	7.7%
	Assignment 10: Compound Inequalities Video Lesson	Thursday of Week 3	7.7%
	Assignment 11: Compound Inequalities Practice	Thursday of Week 3	7.7%
	Assignment 12: Absolute Value Inequalities Video Lesson	Friday of Week 3	7.7%

Week	Graded Activities	Suggested Due Date	% Points
	Assignment 13: Absolute Value Inequalities Practice	Friday of Week 3	7.6%
Week 3 Total Percentage Towards Final Grade			16.6%
4	Assignment 1: Solving Systems of Equations by Graphing Video Lesson	Monday of Week 4	12.5%
	Assignment 2: Solving Systems of Equations by Substitution Video Lesson	Tuesday of Week 4	12.5%
	Assignment 3: Solving Systems of Equations by Elimination Video Lesson	Wednesday of Week 4	12.5%
	Assignment 4: Substitution and Elimination Practice	Wednesday of Week 4	12.5%
	Assignment 5: Value Application Video Lesson	Thursday of Week 4	12.5%
	Assignment 6: Value Application Practice	Thursday of Week 4	12.5%
	Assignment 7: Mixture Application Video Lesson	Friday of Week 4	12.5%
	Assignment 8: Mixture Application Practice	Friday of Week 4	12.5%
Week 4 Total Percentage Towards Final Grade			16.6%
5	Assignment 1: Exponent Properties Video Lesson	Monday of Week 5	9.1%
	Assignment 2: Exponent Properties Practice	Monday of Week 5	9.1%
	Assignment 3: Negative Exponents Video Lesson	Tuesday of Week 5	9.1%
	Assignment 4: Negative Exponents Practice	Tuesday of Week 5	9.1%
	Assignment 5: Scientific Notation Video Lesson	Wednesday of Week 5	9.1%
	Assignment 6: Scientific Notation Practice	Wednesday of Week 5	9.1%
	Assignment 7: Polynomials Video Lesson	Thursday of Week 5	9.1%
	Assignment 8: Multiply Polynomials Video Lesson	Thursday of Week 5	9.1%
	Assignment 9: Multiply Special Products Video Lesson	Thursday of Week 5	9.1%
	Assignment 10: Divide Polynomials Video Lesson	Friday of Week 5	9.1%
	Assignment 11: Polynomials Practice	Friday of Week 5	9%
Week 5 Total Percentage Towards Final Grade			16.6%
6	Final Exam: Algebra Session 1	Friday of Week 6	100%
Week 6 Total Percentage Towards Final Grade			17%
WEIGHTED TOTAL			100%