



**KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM AND INSTRUCTIONAL SERVICES**

HIGH SCHOOL COURSE SYLLABUS

MATHEMATICS DEPARTMENT

Grade 8 Algebra 1

Prerequisites

Successful completion of grade 7 pre-algebra and teacher permission

Course Description

This course offers students a variety of opportunities for engaging in activities that facilitate the transition to algebraic thinking. With practice, review, and the use of manipulatives, students master all the concepts of Algebra 1. Students study rational number properties, variables, polynomials, and factoring. They learn to write, solve and graph linear and quadratic equations, and to solve systems of equations. They also learn to model real-world applications including statistics and probability investigations.

Relevance

Algebra 1 provides a solid foundation for further study in mathematics by helping students develop computational, procedural, and problem solving skills. To be good at mathematics students must learn to translate real-life situations to mathematical models and obtain solutions and Algebra will help students develop these skills.

Course Standards

A. Mathematical processes C. Geometry E. Statistics and probability
B. Number relationships D. Measurement F. Algebraic relationships

Most essential benchmarks may be viewed at: www.kusd.edu.

Lifelong Learning Standards

- Knowledgeable person
- Effective communicator
- Quality producer
- Complex thinker
- Self-directed learner
- Contributing citizen

Lifelong learning benchmarks may be viewed at: www.kusd.edu.

Course Outline

Quarter 1

- Review expressions, equations, functions, and properties of real numbers.
- Solving Linear Equations: solve equations in one variable, solve proportion and percent problems; rewrite equations in two or more variables.
- Probability and Data Analysis: find probabilities of simple and compound events; analyze sets of data and make and interpret data displays.

Quarter 2

- Graphing Linear Equations and Functions: use a variety of methods to graph linear equations and functions; use graphs to study change and solve real-world problems.
- Writing Linear Equations: write linear equations in a variety of forms; use linear models to solve problems; model data with a line of fit.
- Solving and Graphing Linear Inequalities: apply properties of inequality; use statements with “and/or” and “or”; graph inequalities.

Quarter 3

- Systems of Equations and Inequalities: solve linear systems and systems of linear inequalities.
- Exponents and Exponential Functions: apply properties of exponents to simplify expressions; work with scientific notation.
- Polynomials and Factoring: add, subtract, multiply polynomials; factor polynomials; write and solve polynomial equations.

Quarter 4

- Radicals and Geometry Connections: simplify radical expressions; apply Pythagorean Theorem and its converse; use midpoint and distance formulas.
- Solving Quadratic Equations: graph and solve quadratic equations by various methods.
- Rational expressions: simplify, multiply, divide

Board-Approved Instructional Materials

- Larson, Boswell, et al., *Algebra 1*, McDougal Littell, 2007 (ISBN #0-618-59402-7)
- Online resources: www.classzone.com/math_hs_all.cfm (Choose Algebra 1, 2007)

Parents as Partners

Family involvement is an essential element for a student’s success in mathematics. Be positive and support homework, don’t do it for them. Think of yourself as a guide rather than your child’s teacher. You can help by asking questions and listening. You may also help by visiting the online resources and encouraging your child to take advantage of the tutorials, interactive activities, and other online resources listed above.

Methods of Assessment

KUSD quarterly common assessments; quizzes; unit assessments; projects

Board-Approved Grading Scale

Excerpts taken from School Board Rule 6452

GRADING SCALE

A+=98-100 percent	B+=86-89 percent	C+=76-79 percent	D+=66-69 percent
A=93-97 percent	B=83-85 percent	C=73-75 percent	D=63-65 percent
A-=90-92 percent	B-=80-82 percent	C-=70-72 percent	D-=60-62 percent
			F=0-59 percent

MAKE-UP WORK

Students submitting work up to ten school days late without prior approval may receive up to two grades lower on the work than they would have received if the work had been submitted on time (i.e., B+ lowered to a D+). Student work submitted after ten school days without prior approval shall not be accepted for credit and shall be recorded with a score of zero.

Upon returning to school after an absence, a student has the responsibility within the number of days equal to the length of the absence or suspension to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. A truant student has the responsibility on the first day he or she returns to the course/class to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. Lower grades may not be given for late work due to excused absences, suspension, or truancy unless the work is submitted later than agreed upon deadlines.

See Rule 6452 in its entirety at: www.kusd.edu.