



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

HIGH SCHOOL COURSE SYLLABUS

MATHEMATICS DEPARTMENT

Algebra 1 (312011 & 312012)

Number of Credits: 1

Prerequisites

Successful completion of grade 8 prealgebra

Course Description

This course includes the study of rational number properties, variables, polynomials, and factoring. Students 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

This course will provide 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 1 will help students develop this skill.

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

SEMESTER 1

- Expressions, Equations, Functions: Evaluate expressions; apply order of operations; write equations and inequalities; Problem-solving plan
- Properties of Real Numbers: Add, subtract, multiply, and divide real numbers; square roots
- Solving Linear Equations: Solve various equations; write ratios and proportions; solve percent problems.
- Graphing Linear Equations and Functions: Coordinate plane; graph linear equations; slope and rate of change

- Writing Linear Equations: Write linear equations in various forms; write equations of parallel and perpendicular lines

SEMESTER 2

- Probability: Finding probabilities and using measures of central tendency
- Solving and Graphing Linear Inequalities: Solve and graph inequalities; solve absolute value equations
- Systems of Equations and Inequalities: Solve linear systems by graphing, substitution, and elimination; solve systems of linear inequalities
- Exponents and Exponential Functions: Exponent properties, scientific notation
- Polynomials and Factoring: Add, subtract, and multiply polynomials; factoring, solving polynomial equations
- Quadratic Equations and Functions: Using square roots and quadratic formula to solve quadratic equations
- Radicals and Geometry Connections: Radicals and Pythagorean Theorem

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

Final exams should be cumulative in nature, emphasizing the most essential benchmarks for the course. Results of the final exam represent 20 percent of the final grade, but this single measure *may not* drop a student's grade by more than one letter grade. In courses that rely heavily on a major project, performance exhibition, etc., the project should be divided into stages or components and each of those should be graded separately, providing students with frequent and specific feedback.

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.