



KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM & INSTRUCTIONAL SERVICES
MATHEMATICS

AP Calculus AB (353030)
STANDARD A: MATHEMATICAL PROCESSES
Representation, Reasoning, Problem Solving
Communication, Connections
<i>I can use reasoning and logic to formulate, analyze, and solve problems, and to test the reasonableness of my results.</i>
<i>A-1.12C</i>
<i>I can clearly communicate mathematical concepts either orally or in written form.</i>
<i>A-2.12C</i>
<i>I can use a computer or a calculator as a problem solving tool.</i>
<i>A-3.12C</i>
<i>I can read and interpret mathematical text and other mathematical representations ,e.g. numbers, symbols, diagrams, models.</i>
<i>A-4.12C</i>
STANDARD C: GEOMETRY AND SPATIAL SENSE
I can find the area under a curve.
C-1.12C
I can draw a slope field.
C-2.12C
I can find the area of a region between two curves.
C-3.12C
I can find the volume using disks and washers.
C-4.12C
STANDARD F: ALGEBRAIC RELATIONSHIPS
Patterns, Relations, and Functions
Expressions, Equations, Inequalities
Properties
I can find limits graphically and numerically.
F-1.12C
I can evaluate limits analytically.
F-2.12C
I can determine continuity and one-sided limits.
F-3.12C
I can find infinite limits.
F-4.12C
<i>I can find the derivative and use it to find tangent lines.</i>
<i>F-5.12C</i>
I can use basic differentiation rules to find rates of change.
F-6.12C
I can use product and quotient rules and find higher order derivatives.
F-7.12C
I can use the chain rule.
F-8.12C
I can differentiate implicitly.
F-9.12C
I can solve related rate problems
F-10.12C
I can find the extrema on an interval.
F-11.12C
I can use Rolle's Theorem and the Mean Value Theorem.
F-12.12C
I can use the First Derivative test to determine where a function is increasing and decreasing.

Most essential benchmarks appear in bold, italicized print.

F-13.12C
I can use the Second Derivative Test to determine concavity. F-14.12C
I can solve optimization problems. F-15.12C
I can evaluate differentials. F-16.12C
I can antidifferentiate and evaluate indefinite integrals. F-17.12C
I can evaluate Riemann Sums that represent definite integrals. F-18.12C
I can use the Fundamental Theorem of Calculus. F-19.12C
I can integrate by substitution. F-20.12C
I can evaluate a numerical integral algebraically and using approximation methods. F-21.12C
I can differentiate and integrate natural logarithmic functions, exponential functions, trigonometric functions, and inverse trigonometric functions. F-22.12C
I can solve growth and decay differential equations. F-23.12C
I can separate variables. F-24.12C