Tahoma
Math 7 Report Benchmarks

The following benchmarks offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Number System
Applies and extends previous understandings of operations to add, subtract, multiple and divide (negative and positive) rational numbers.
Defines and compares rational and irrational numbers.
Ratios & Proportional Relationships
Analyze proportional relationships and use them to solve real-world and mathematical problems.
Expressions & Equations
Uses properties of operations to generate equivalent expressions.
Solves real-life and mathematical problems using numerical and algebraic expressions, inequalities and equations.
Understands the connections between proportional relationships, lines, and linear equations, with a focus on slope.
Solves linear equations in one variable graphically and algebraically.
Works with radicals and integer exponents.
Geometry
Knows the formulas for area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms, and uses them to solve real-world and mathematical problems

Knows the formulas for the volumes of cones, cylinders, and spheres and uses them to solve real-world and mathematical problems.
Knows the formulas for the area and circumference of a circle, uses them to solve problems and can give an informal explanation of the relationships between the radius, the circumference and area of a circle with guidance.
Uses informal arguments to prove triangle, angle and transversal angle relationships, and applies facts to solve problems.
Understands and compares congruent and similar, and uses properties of similar/congruent figures to solve problems.
Statistics & Probability
Uses graphs, measures of center (mean, median, mode) and measures of variability (spread, range, mean absolute deviation) to draw informal inferences to compare two populations.
Uses random sampling to draw inferences about a population.
Calculates and applies theoretical and experimental probability, including for compound events.

Tahoma
Math 8 Report Benchmarks

Number System
Solve real-world and mathematical problems involving the four operations with (negative and positive) rational numbers.
Defines and compares rational and irrational numbers.
Ratios & Proportional Relationships
Analyze proportional relationships and use them to solve real-world and mathematical problems.
Expressions & Equations
Understands the connections between proportional relationships, lines, and linear equations.
Analyze and solve linear equations and pairs of simultaneous linear equations.
Works with radicals and integer exponents.
Functions
Define, evaluate, and compare functions.
Use functions to model relationships between quantities.
Geometry
Understands and compares congruent and similar, and uses properties of similar/congruent figures to solve problems.
Solve real-world and mathematical problems involving area, surface area and volume of various shapes, including cylinders, cones, and spheres.
Understand and apply the Pythagorean Theorem.

Statistics & Probability
Investigate patterns of association in bivariate data.

Tahoma
Algebra I Report Benchmarks

Number & Quantity
Extends the properties of exponents to rational exponents and radicals, and uses the properties of rational and irrational numbers to solve problems.
Reasons quantitatively and use units to solve problems.

Algebra
Understands solving equations as a process of reasoning and explains the reasoning, particularly for linear equations.
Solves linear and quadratic equations and inequalities in one variable.
Identifies and interprets the structure of linear, exponential and quadratic expressions, including through the use of equivalent expressions.
Creates linear, quadratic and exponential equations that describe numbers or relationships.
Analyzes and solves linear equations and pairs of simultaneous linear equations.
Performs arithmetic operations on polynomials.
Solves linear-quadratic and linear-linear systems of equations.
Represent and solve linear, quadratic and exponential equations and inequalities graphically.
Constructs linear and exponential functions (including arithmetic and geometric sequences) given a graph, a description of a relationship, or input-output pairs.
Distinguishes between and compares situations that can be modeled with linear functions, quadratic functions and exponential functions.

Defines, evaluates, and compares functions, particularly for linear relationships; evaluates and compares various representations of a function.
Understands the concept of a function and use function notation and uses functions to model relationships.
Interprets linear, quadratic and exponential functions (domain, range, rate of change, minimum, maximum) that arise in applications in terms of the context.
Analyzes linear, quadratic and exponential functions using different representations (i.e. equivalent algebraic forms, graphically).
Builds new linear, quadratic, exponential and absolute value functions from existing functions (i.e. shifts and finds the inverse of linear functions).
Geometry
Understands and applies the Pythagorean theorem.
Statistics & Probability
Summarizes, represents, and interprets univariate data using shape, measures of center and spread.
Summarizes, represents, and interprets bivariate data using scatterplots, linear models, positive/negative association, and frequency tables.
Distinguishes between correlation and causation.

Tahoma
Geometry Report Benchmarks

Geometry
Experiment with transformations in the plane
Understands congruence in terms of rigid motions.
Prove geometric theorems using similarity, coordinates, and algebraic methods.
Makes formal geometric constructions with a variety of tools and methods.
Understand similarity in terms of similarity transformations.
Defines and derives trigonometric ratios; solves problems involving right triangles.
Apply trigonometry to general triangles.
Understands and apply theorems about circles.
Finds arc lengths and areas of sectors of circles.
Translates between the geometric description and the equation for a conic section, including the formula for a circle and other conic equations given foci and directrices.
Explains volume formulas and use them to solve problems.
Visualizes relationships between two-dimensional and three-dimensional objects.
Applies geometric concepts in modeling situations.
Statistics & Probability
Understands independence and conditional probability and use them to interpret data from simulations or experiments.

Uses the rules of probability to compute probabilities of compound events.
Uses probabilities to make fair decisions, and analyze decisions and strategies using probability concepts