

At the end of the school year, students will be able to... (No Calculators Allowed)

GOAL 6 Numbers Sense and Computation

Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.

STANDARD A

Demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.

Representing and Ordering

- _____ Read, write, recognize, and model equivalent representations of whole numbers and their place values up to 1,000. (*Introduce: up to 10,000*)
- _____ Identify and write (in words and standard form) whole numbers up to 1,000. (*Introduce: up to 10,000*)
- _____ Recognize a fraction ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$) represented with a pictorial model. (*Introduce: common fractions*)
- _____ Skip count by 2, 5, and 10.
- _____ Order and compare whole numbers up to 100 using symbols ($>$, $<$, or $=$) and words (e.g., greater/more than, less than, equal to). (*Introduce: up to 1,000*)
- _____ Identify and express values of coins.
- _____ Identify and locate whole numbers on a number line.
- _____ Solve problems involving odd and even numbers, greater than, less than.

STANDARD B

Investigate, represent and solve problems using number facts, operations (addition, subtraction, multiplication and division) and their properties, algorithms, and relationships.

STANDARD C

Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.

Computation, Operations, Estimation, and Properties

- _____ Solve problems and number sentences involving addition and subtraction using basic facts.
- _____ Model and apply basic addition/subtraction facts.
- _____ Solve problems and number sentences involving addition and subtraction without regrouping. (*Introduce: regrouping*)
- _____ Solve problems involving the value of a collection of like sets of coins whose total value is \$1.00 or less.
- _____ Use the inverse relationships between addition and subtraction to complete basic fact sentences and solve problems (e.g., fact families).
- _____ Solve problems involving the additive identity of zero (e.g., $3 + 0 = 3$).
- _____ Make estimates appropriate to a given situation with whole numbers.

GOAL 7 Measurement

Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.

STANDARD A

Measure length, distance, weight, volume, and temperature using customary and metric units.

STANDARD B

Measure and compare quantities using appropriate units, instruments, and methods.

STANDARD C

Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate findings.

Units, Tools, Estimation, and Applications

- _____ Select and use appropriate standard units and tools to measure length (to nearest inch, time (to nearest hour, half hour, and calendar terms).
- _____ Solve problems involving perimeter of a polygon with given side lengths or a given non-standard unit (e.g., paper clip).
- _____ Solve problems involving the area of a figure when whole units are shown within the figure.
- _____ Compare and estimate length (including perimeter), and weight/mass using referents.

GOAL 8 Algebra

Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.

STANDARD A

Describe numerical relationships using variables and patterns.

Representations, Patterns, and Expressions

- _____ Determine a missing term in a pattern, describe a pattern, and extend a pattern when given a description or pattern.
- _____ Write an expression to represent a situation.

STANDARD C

Solve problems using systems of numbers and their properties.

STANDARD D

Use algebraic concepts and procedures to represent and solve problems

Writing, Interpreting, and Solving Equations

- _____ Represent simple mathematical relationships with number sentences (equalities and inequalities).
- _____ Solve one-step addition and subtraction equations that have a missing number or missing operation sign (e.g., $3 + \square = 5$, $6 \square 1 = 7$).
- _____ Solve word problems involving unknown quantities.



GOAL 9 Geometry

Use geometric methods to analyze, categorize and draw conclusions about points, lines, planes and space.

STANDARD A

Demonstrate and apply geometric concepts involving points, lines, planes and space.

Properties of Single Figures and Coordinate Geometry

- _____ Identify and describe two-dimensional shapes (triangles, squares, rectangles, pentagons, hexagons, and octagons) according to the number of sides and number of vertices.
- _____ Identify and describe three-dimensional shapes (cubes, spheres, cones, cylinders, and pyramids) according to their characteristics (faces, vertices).
- _____ Describe relative positions in space (e.g.,  is 2 units below , point A is 3 units to the right/left of point B).
- _____ Identify whether or not a figure has a line of symmetry, and identify the line of symmetry.

STANDARD B

Identify, describe, classify and compare relationships using points, lines, planes and solids.

Relationships Between and Among Multiple Figures

- _____ Predict the result of putting shapes together and taking them apart e.g., two triangles make a quadrilateral.
- _____ Identify congruent figures by visual inspection.
- _____ Determine the distance between two points on the number line in whole numbers.

GOAL 10 Data Collection and Statistical Analysis

Collect, organize and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.

STANDARD A

Organize, describe, and make predictions from existing data.

STANDARD B

Formulate questions, design data collection methods, gather and analyze data and communicate findings.

Data Analysis and Statistics

- _____ Read and interpret data represented in a pictograph, bar graph, tally chart, or table.
- _____ Complete missing parts of a pictograph, bar graph, tally chart, or table for a given set of data.

STANDARD C

Determine, describe and apply the probabilities of events.

Probability

- _____ Classify events using words such as possible and impossible.