

Math

At the end of the school year, students will be able to...

GOAL 6 Numbers Sense and Computations

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.

- _____ Read, write, compare and model numerals to hundred millions.
- _____ Demonstrate place value to 5-digits and explore to 6-digits and above.
- _____ Identify fractional parts.
- _____ Explore properties such as equivalent fractions, mixed numbers and improper fractions.
- _____ Identify and use decimals through hundredths with money applications and explore through thousandths.

STANDARD B

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

- _____ Practice and divide with 2-digit numbers.
- _____ Explore addition and subtraction of fractions with like and unlike denominators.
- _____ Add and subtract decimals through hundredths with money.
- _____ Solve problems using a variety of methods with multiple operations.

STANDARD C

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

- _____ Add and subtract accurately.
- _____ Multiply and divide basic facts accurately.
- _____ Estimate solution to addition, subtraction, multiplication and division problems.
- _____ Round to the nearest ten, hundred and dollar.
- _____ Demonstrate mental math strategies with all operations.

STANDARD D

Solve problems using comparisons of quantities, ratios, proportions and percents.

- _____ Explore the relationship of percents, decimals and fractions.
- _____ Explore ratios and proportions.

GOAL 7 Measurement

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

STANDARD A

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

- _____ Measure length, distance, weight, volume and temperature in customary and metric units.
- _____ Identify and express values to one thousand dollars.
- _____ Make change to ten dollars.
- _____ Practice measuring angles in degrees.
- _____ Find perimeters and areas of give objects.

STANDARD B

Estimate measurements and determine acceptable levels of accuracy.

- _____ Determine what units of measurement are appropriate for given situations.

STANDARD C

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

- _____ Find perimeters, areas and volumes of shapes.
- _____ Explore length, distance, weight, volume and temperature in story problems.

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.

- _____ Find patterns in multiplication and division facts.
- _____ Use mathematical symbols and explore use of $<$, $>$ and $=$ to write number sentences.
- _____ Explore concepts of variable to represent objects or attributes.

STANDARD B

Interpret and describe numerical relationships using tables, graphs and symbols.

- _____ Identify and complete number and geometric patterns.
- _____ Write and solve number sentences with missing addends and factors and explore missing products.

STANDARD C

Solve problems using systems of numbers and their properties.

- _____ Demonstrate number properties (commutative, zero, identity).

STANDARD D Using algebraic concepts and procedures to represent problem solving.

_____ Graph ordered pairs in a one-quadrant coordinated system.

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 solids.

_____ Distinguish two-dimensional versus three-dimensional shapes.

_____ Identify and classify polygons.

STANDARD B

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

_____ Identify concepts of lines and line segments.

_____ Explore circle vocabulary (radius, diameter, and circumference).

_____ Identify congruent and similar figures.

_____ Create shapes and designs that have one or more lines of symmetry.

_____ Identify parallel and intersecting lines.

STANDARD C

Construct convincing arguments and proofs to solve problems.

_____ Construct basic shapes.

STANDARD D

Use trigonometric ratios and circular functions to solve problems.

_____ Identify different types of angles.

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.

_____ Analyze data found in graphs, tables, and schedules.

STANDARD B

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

_____ Develop and implement a plan for collecting and analyzing data.

_____ Write mathematical questions.

_____ Practice finding mean, median, mode and range.

STANDARD C Determine, describe and apply the probabilities of events.

_____ Explore chance through games and problems.