

USD 312

Grade 5 Mathematics

Standard 1: Students will use number sense in a variety of situations.

Indicators of Performance:

Students will -

- S 1. know, explain, and use equivalent representations for: whole numbers from 0 through 1,000,000; fractions greater than or equal to zero including mixed numbers; decimals greater than or equal to zero through hundredths place and when used as monetary amounts
- 2. determine the place value of digits within a given number (millions to hundredths)
- 3. round numbers to nearest million and nearest hundredth
- 4. understand the meaning of pi (introduction only; not assessed)
- S 5. use various estimation strategies to estimate whole number quantities from 0 through 100,000; fractions greater than or equal to zero including mixed numbers; decimals greater than or equal to zero through hundredths place; and monetary amounts to \$10,000 and explain the process used
- S 6. determine if a real-world problem calls for an exact or approximate answer and perform the appropriate computation using various computational methods including mental math, paper and pencil, concrete materials, and appropriate technology

Standard 2: Students will use computation in a variety of situations.

Indicators of Performance:

Students will -

- SN1. identify, explain, and find the greatest common factor and least common multiple of two or more whole numbers through the basic multiplication facts
- 2. add and subtract fractions with like denominators
- 3. add and subtract fractions with unlike denominators (introduction only; not assessed)
- SN4. solve one- and two-step real-world problems using these computational procedures: add and subtract whole numbers from 0 through 100,000; multiplies through a four-digit whole number by a two-digit whole number; multiplies monetary amounts by a one- or two-digit whole number; divides whole numbers through a 2-digit divisor and a 4-digit dividend with the remainder as a whole number or a fraction; adds and subtracts decimals from thousands place through hundredths place; multiplies and divides by 10, 100, 1,000 and single digit multiples of each

S preceding an indicator means it is a state assessed item.

SN preceding an indicator means it is a non-calculator state assessed item.

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Standard 3: Students will use algebraic concepts in a variety of situations.

Indicators of Performance:

Students will -

- S 1. explain and use variables and symbols to represent unknown whole number quantities from 0 through 1,000 and variable relationships
- SN2. solve one-step linear equations with one variable and a whole number solution using addition and subtraction with whole numbers from 0 through 100 and multiplication with the basic facts
- S 3. use a function table (input/output machine, T-table) to identify, plot, and label the ordered pairs in the first quadrant of a coordinate plane

Standard 4: Students will use geometry in a variety of situations.

Indicators of Performance:

Students will –

- S 1. recognize and describe the solids (cubes, rectangular prisms, cylinders, cones, spheres, triangular prisms, rectangular pyramids, triangular pyramids) using the terms faces, edges, and vertices (corners)
- S 2. solve real-world problems by applying the properties of: plane figures (circles, squares, rectangles, triangles, ellipses, rhombi, parallelograms, hexagons, pentagons) and the line(s) of symmetry
- S 3. convert within the customary system: inches and feet, feet and yards, inches and yards, cups and pints, pints and quarts, quarts and gallons, pounds and ounces
- S 4. solve real-world problems by applying appropriate measurements and measurement formulas: length to the nearest eighth of an inch or to the nearest centimeter; temperature to the nearest degree; weight to the nearest whole unit (pounds, grams, nonstandard units); time including elapsed time; hours in a day, days in a week, and days and weeks in a year; months in a year and minutes in an hour; perimeter of squares, rectangles, and triangles; area of squares and rectangles
- S 5. recognize three-dimensional figures (rectangular prisms, cylinders, cones, spheres, triangular prisms, rectangular pyramids) from various perspectives (top, bottom, side, corners)

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Standard 5: Students will use statistics in a variety of situations.

Indicators of Performance:

Students will -

- S 1. conduct an experiment or simulation with a simple event including the use of concrete materials; record the results in a chart, table, or graph; use the results to draw conclusions about the event; and make predictions about future events
- S 2. identify, explain, and calculate or find these statistical measures of a whole number data set of up to twenty whole number data points from 0 through 1,000: minimum and maximum values, range, mode, median including answers expressed as a decimal or a fraction without reducing to simplest form; mean including answers expressed as a decimal or a fraction without reducing to simplest form
- S 3. interpret and use data to make reasonable inferences, predictions, and decisions, and to develop convincing arguments from these data displays: graph using concrete materials; pictographs; frequency tables; bar and line graphs; Venn diagrams and other pictorial displays; line plots; charts and tables; circle graphs

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