

## Idaho Content Standard with Limits 4<sup>th</sup> Grade Math

### **Standard 1: Number and Operation**

Read, write, compare, and order whole numbers to 100,000.

Content Limit: When comparing, symbols for greater than and less than will not be used. When ordering, no more than four values are used. Numbers may be ordered least to greatest or greatest to least.

Identify and apply place value in whole numbers.

Content Limit: Whole numbers to 100,000.

Count the value of a collection of bills and coins up to \$100.00.

Content Limit: Any quantity of coins or bills whose sum is under \$100. Pictures of bills and coins are not required.

Read, write, compare, and order commonly used fractions with pictorial representations.

Content Limit: Fraction denominators limited to 2, 3, 4, 5, 6, and 8. Fractions not simplified. Improper fractions not allowed as correct answer.

Use decimal numbers with money.

Content Limit: Items will state an amount of money less than \$100 in words and ask to find the appropriate expression or value written with dollar sign (\$) and decimal point.

Add and subtract whole numbers.

Content Limit: At most, three addends. Each number contains at most, three digits. Differences must be greater than zero. May be done with or without regrouping. Expression must be clearly stated. Items may be written in horizontal or vertical form.

Multiply up to two-digit by two-digit whole numbers and divide whole numbers by one-digit divisors.

Content Limit: Divide up to three-digit whole numbers by one-digit divisors. Division must result in a whole number quotient. Division problems may be written with bracket or division symbol ( $\div$ ). Expression must be clearly stated. Items may be written in horizontal or vertical form.

Add and subtract fractions with like denominators that do not require simplification.

Content Limit: Fraction denominators limited to 2, 3, 4, 6, 8, 10, and 12. Improper fractions allowed in answer options. Expression must be clearly stated. Items may be written in horizontal or vertical form.

Add and subtract decimals using money.

Content Limit: May be done with or without regrouping. Values for answer options up to \$10.00. All values written with dollar sign (\$) and decimal point. Expression must be clearly stated. Items may be written in horizontal or vertical form.

Select and use appropriate operations to solve word problems.

Content Limit: Content limits for objectives 1.2.2, 1.2.3, 1.2.4, and 1.2.5 apply. Expression should not be stated.

### **Standard 2: Concepts and Principles of Measurement**

Select appropriate units and tools to make the formal measurements of length, temperature, and weight in both systems.

Select appropriate units and tools only. Units are degrees, inches, feet, yards, miles, millimeters, centimeters, meters, ounces, pounds, tons, grams, kilograms, and degrees. Tools are rulers, yardsticks, meter sticks, thermometers, clocks, and scales.

Estimate length, time, weight, and temperature in real-world problems using standard units.

Content Limit: Lengths are measured in inches, feet, and yards. Time is measured in minutes, hours, and days. Weight is measured in ounces, pounds, and tons. Capacity is measured in cups, quarts, and gallons. May select estimate of size from among list of different numbers with same units (e.g., 1 inch, 1 foot, 10 inches, 10 feet).

Tell time to the nearest minute using digital and analog clocks.

Content Limit: Second hand not shown on clock face. Picture of analog clock is given and answer options show time on digital clock OR digital clock is shown and answer options are analog clocks.

Solve real-world problems related to elapsed time.

Content Limit: Times given in hours and minutes.

Convert units of length and time within the U. S. Customary system.

Content Limit:

Units of length are inches, feet, and yards. Units of time are seconds, minutes, hours, and days. Conversion may only bridge two adjacent units such as hours to minutes and not hours to seconds. Conversions may not include or result in fractions.

Recall length and volume (capacity) equivalences involving inches, feet, yards, cups, pints, quarts, and gallons in the U.S. Customary system.

Content Limit: Equivalences include 12 inches = 1 foot,

3 feet = 1 yard,

2 cups = 1 pint,

2 pints = 1 quart, and

4 quarts = 1 gallon. No conversions.

### **Standard 3: Concepts and Language of Algebra and Functions**

Write a division problem using a bracket (÷) and/or the division symbol (÷).

Content Limit: Whole numbers less than 100,000. Student is not required to find the quotient.

Write a number sentence using simple geometric shapes or letters of the alphabet as symbols to represent an unknown number.

Content Limit: Information given in words to be rewritten as a number sentence that includes a symbol. Number sentence includes no more than one operation. Geometric symbols used limited to squares, rectangles and triangles.

Show the relationship between multiplication and division using fact families.

Content Limit: Whole number factors between 1 and 10, inclusive.

Read and use symbols of “<,” “>,” and “=” to express relationships with numbers through 1,000,000.

Content Limit: May compare results of expressions. Use whole numbers and expressions with no more than one operation. ‘Read’ means to express in words.

Use the identity and zero properties of multiplication.

Content Limit: Item can be assessed using a numeric representation ( $4 \times 0$  or  $4 \times 1$ ) or a description in words such as “Any number times zero ...”

- a) Equals itself
- b) Equals zero
- c) Does not exist
- d) Equals the number with a zero added on...,etc.

Factors limited to 0 through 9.

Solve missing factor equations.

Content Limit: Whole number factors with products less than 100. Geometric symbols used to represent missing factor limited to squares, rectangles, or triangles.

Identify the rule (function) for a pattern using whole numbers and addition and then extend the pattern.

Content Limit: Numbers less than 100. Items can ask for a rule, an extension of the pattern, or both. Minimum of four terms of pattern must be given.

### **Standard 4: Concepts and Principles of Geometry**

Identify, compare, and analyze attributes of two- and three- dimensional shapes, including parallel, intersecting, and perpendicular lines, and develop vocabulary to describe the attributes.

Content Limit: Identify and compare only. Two-dimensional shapes limited to triangles, quadrilaterals (rectangle, square, rhombus, and trapezoid), and hexagons. Three-dimensional shapes limited to cubes, cylinders, cones, spheres, pyramids, and rectangular prisms.

Predict the results of sliding and flipping two-dimensional shapes.

Content Limit: Use diagrams showing non-regular polygons on a grid. Include items where student is given a description and there is a graphic shown for each answer option.

Identify multiple lines of symmetry in two-dimensional shapes.

Content Limit: Shapes limited to parallelogram, hexagon, and octagon.

Use ordered pairs to identify the position of a point in the first quadrant on a coordinate grid.

Content Limit: Coordinates are whole numbers. Point may not be on  $x$ -axis or  $y$ -axis.

## Standard 5: Data Analysis, Probability, and Statistics

Read and interpret simple tables, charts, bar graphs, and line graphs.

Content Limit: Graphics may have at most ten data categories. Scales are in increments of 1, 2, 5, or 10 or must be consistent with real-world applications. Bar graphs may be vertical or horizontal. Pictograph may be used as a type of bar graph.

Collect, organize, and display data in tables and charts to answer a question

Content Limit: Given data, choose a display. Graphics may have at most ten data categories. Scales are in increments of 1, 2, 5, or 10, or must be consistent with real-world applications. Bar graphs may be vertical or horizontal. Pictograph may be used as a type of bar graph. Line graphs, vertical bar graphs, and horizontal bar graphs may be used.

Find the mode of a simple set of whole number data.

Content Limit: Numbers used for data are less than 100. Data set must contain unique mode. Limited to ten values in data set.

Predict the results of simple probability experiments using coins or spinners (e.g., 3 out of 6 choices).

Content Limit: Situation may involve at most two coins or spinners divided in up to six equal sections.

Make predictions based on data.

Content Limit: Data given in tables, bar graphs, or line graphs