

IDAHO CONTENT STANDARDS GRADE 4 MATHEMATICS

Cognitive level codes:

- B: Memorize
- C: Perform procedures
- D: Demonstrate understanding
- E: Conjecture, generalize, prove
- F: Solve non-routine problems, make connections

Calculator codes:

- NO: student MUST NOT have a calculator while completing this item in order to assess this objective.

Shaded objectives should be assessed in the classroom, but not included on the ISAT assessment.

Standard 1: Number and Operation

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8
Goal 1.1: Understand and use numbers.	4.M.1.1.1 Read, write, compare, and order whole numbers to 100,000. (297.01.a) CL: B Calc: NO 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.	4.M.1.1.2 Identify and apply place value in whole numbers. (297.01.b) CL: B Calc: NO Content Limit: Whole numbers to 100,000.	4.M.1.1.3 Count the value of a collection of bills and coins up to \$100.00. (297.01.c) CL: C Calc: NO Content Limit: Any quantity of coins or bills whose sum is under \$100. Pictures of bills and coins are not required.	4.M.1.1.4 Read, write, compare, and order commonly used fractions with pictorial representations. (297.01.d) CL: D Calc: NO Content Limit: Fraction denominators limited to 2, 3, 4, 5, 6, and 8. Fractions not simplified. Improper fractions not allowed as correct answer.	4.M.1.1.5 Use decimal numbers with money. (297.01.e) CL: B Calc: NO 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.	4.M.1.1.6 Select strategies appropriate for solving a problem. (298.01.a) CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.	4.M.1.1.7 Use appropriate vocabulary. (297.01.f) CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.	

<p>Goal 1.2: Perform computations accurately.</p>	<p>4.M.1.2.1 Recall multiplication facts through 10 x 10. (297.02.e)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.2.2 Add and subtract whole numbers. (297.02.a)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.1.2.3 Multiply up to two-digit by two-digit whole numbers and divide whole numbers by one-digit divisors. (297.02.b)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.1.2.4 Add and subtract fractions with like denominators that do not require simplification. (297.02.c)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.1.2.5 Add and subtract decimals using money. (297.02.d)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.1.2.6 Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (297.02.f)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.2.7 Select and use appropriate operations to solve word problems and show or explain work. (298.01.b)</p> <p>CL: D Calc: NO 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. 'Show or explain the work' assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.2.8 Use appropriate vocabulary. (297.02.g)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>
<p>Goal 1.3: Estimate and judge reasonableness of results.</p>	<p>4.M.1.3.1 Estimate to predict computation results. (297.03.a)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.3.2 Use estimation to evaluate the reasonableness of an answer. (297.03.b)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.3.3 Investigate the use of a four-function calculator to solve complex grade-level problems. (298.03.a)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.1.3.4 Use appropriate vocabulary. (297.03.c)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>				

Standard 2: Concepts and Principles of Measurement

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8
<p>Goal 2.1: Understand and use U.S. customary and metric measurements.</p>	<p>4.M.2.1.1 Select and use appropriate units and tools to make the formal measurements of length, temperature, and weight in both systems. (299.01.a)</p> <p>CL: C Calc: NO Content Limit: 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. 'Use ... tools to make formal measurements' to be assessed in the classroom, not on the ISAT.</p>	<p>4.M.2.1.2 Estimate length, time, weight, and temperature in real-world problems using standard units. (299.01.b)</p> <p>CL: C Calc: NO 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).</p>	<p>4.M.2.1.3 Tell time to the nearest minute using digital and analog clocks. (299.01.e)</p> <p>CL: B Calc: NO 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.</p>	<p>4.M.2.1.4 Solve real-world problems related to elapsed time. (299.01.f)</p> <p>CL: F Calc: NO Content Limit: Times given in hours and minutes.</p>	<p>4.M.2.1.5 Convert units of length and time within the U. S. Customary system. (299.01.c)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.2.1.6 State that there are 365 days in a year and 52 weeks in a year.</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.2.1.7 Recall length and volume (capacity) equivalences involving inches, feet, yards, cups, pints, quarts, and gallons in the U.S. Customary system.</p> <p>CL: B Calc: CR 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.</p>	<p>4.M.2.1.8 Use appropriate vocabulary. (299.01.g)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>
<p>Goal 2.2: Apply the concepts of rates, ratios, and proportions.</p>	<p>No objectives at this grade level.</p>							
<p>Goal 2.3: Apply dimensional analysis.</p>	<p>No objectives at this grade level.</p>							

Standard 3: Concepts and Language of Algebra and Functions

Goals:	Objective 1	Objective 2	Objective 3	Objective 4
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	<p>4.M.3.1.1 Write a division problem using a bracket ($\overline{\quad}$) and/or the division symbol (\div). (300.01.a)</p> <p>CL: B Calc: NO Content Limit: Whole numbers less than 100,000. Student is not required to find the quotient.</p>	<p>4.M.3.1.2 Write a number sentence using simple geometric shapes or letters of the alphabet as symbols to represent an unknown number. (300.01.b)</p> <p>CL: C Calc: NO 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.</p>	<p>4.M.3.1.3 Show the relationship between multiplication and division using fact families.</p> <p>CL: D Calc: NO Content Limit: Whole number factors between 1 and 10, inclusive.</p>	<p>4.M.3.1.4 Read and use symbols of “<,” “>,” and “=” to express relationships with numbers through 1,000,000. (300.01.c)</p> <p>CL: C Calc: CN Content Limit: May compare results of expressions. Use whole numbers and expressions with no more than one operation. ‘Read’ means to express in words.</p>
Goal 3.2: Evaluate algebraic expressions.	<p>4.M.3.2.1 Use the identity and zero properties of multiplication.</p> <p>CL: C Calc: NO Content Limit: Item can be assessed using a numeric representation (4×0 or 4×1) or a description in words such as “Any number times zero ...”</p> <ul style="list-style-type: none"> a) Equals itself b) Equals zero c) Does not exist d) Equals the number with a zero added on...etc. <p>Factors limited to 0 through 9.</p>			
Goal 3.3: Solve algebraic equations and inequalities.	<p>4.M.3.3.1 Solve missing factor equations. (300.03.a)</p> <p>CL: C Calc: NO Content Limit: Whole number factors with products less than 100. Geometric symbols used to represent missing factor limited to squares, rectangles, or triangles.</p>			

Goal 3.4: Understand the concept of functions.	4.M.3.4.1 Identify the rule (function) for a pattern using whole numbers and addition and then extend the pattern. (303.01.a) CL: F Calc: NO 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.	4.M.3.4.2 Use appropriate vocabulary. (303.01.c) CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.		
Goal 3.5: Represent equations, inequalities and functions in a variety of formats.	No objectives at this grade level.			
Goal 3.6: Apply functions to a variety of problems.	No objectives at this grade level.			

Standard 4: Concepts and Principles of Geometry

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
<p>Goal 4.1: Apply concepts of size, shape, and spatial relationships.</p>	<p>4.M.4.1.1 Identify, compare, and analyze attributes of two- and three-dimensional shapes, including parallel, intersecting, and perpendicular lines, and develop vocabulary to describe the attributes. (301.01.a)</p> <p>CL: B, C, D Calc: NO 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.</p> <p>‘Analyze attributes ... and develop vocabulary to describe the attributes’ to be assessed in the classroom, not on the ISAT.</p>	<p>4.M.4.1.2 Predict the results of sliding and flipping two-dimensional shapes. (301.01.d)</p> <p>CL: D Calc: NO 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.</p>	<p>4.M.4.1.3 Identify multiple lines of symmetry in two-dimensional shapes.</p> <p>CL: B, C Calc: NO Content Limit: Shapes limited to parallelogram, hexagon, and octagon.</p>	<p>4.M.4.1.4 Discuss perimeters of polygons, and areas and perimeters of rectangles and squares, using concrete objects. (301.01.c)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>	<p>4.M.4.1.5 Use appropriate vocabulary. (301.01.e)</p> <p>CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.</p>
<p>Goal 4.2: Apply the geometry of right triangles.</p>	<p>No objectives at this grade level.</p>				
<p>Goal 4.3: Apply graphing in two dimensions.</p>	<p>4.M.4.3.1 Use ordered pairs to identify the position of a point in the first quadrant on a coordinate grid.</p> <p>CL: C Calc: NO Content Limit: Coordinates are whole numbers. Point may not be on x-axis or y-axis.</p>				

Standard 5: Data Analysis, Probability, and Statistics

Goals:	Objective 1	Objective 2
Goal 5.1: Understand data analysis.	4.M.5.1.1 Read and interpret simple tables, charts, bar graphs, and line graphs. (302.01.a) CL: D Calc: NO 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.	4.M.5.1.2 Use appropriate vocabulary. (302.01.c) CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.
Goal 5.2: Collect, organize, and display data.	4.M.5.2.1 Collect, organize, and display data in tables and charts to answer a question. (302.02.a) CL: C Calc: NO 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. 'Collect' data to be assessed in the classroom, not on the ISAT.	4.M.5.2.2 Display data in a bar graph using appropriate notation such as a title, axes labels, and reasonable scales. (302.02.a) CL: Calc: Content Limit: Assessed in the classroom, not on the ISAT.
Goal 5.3: Apply simple statistical measurements.	4.M.5.3.1 Find the mode of a simple set of whole number data. CL: C Calc: NO Content Limit: Numbers used for data are less than 100. Data set must contain unique mode. Limited to ten values in data set.	
Goal 5.4: Understand basic concepts of probability.	4.M.5.4.1 Predict the results of simple probability experiments using coins or spinners (e.g., 3 out of 6 choices). (302.04.a) CL: E Calc: NO Content Limit: Situation may involve at most two coins or spinners divided in up to six equal sections.	
Goal 5.5: Make predictions or decisions based on data.	4.M.5.5.1 Make predictions based on data. (298.01.c) CL: E Calc: NO Content Limit: Data given in tables, bar graphs, or line graphs.	