

North Dakota Mathematics Content Standards

Grade 4 Prioritized Standards

Northeast Education Services Cooperative (NESC) - 2017



How to Read This Document

Example: 4.OA.1

"4.OA.1" references the grade level followed by the domain and then the standard. This coding is taken directly from the North Dakota Department of Public Instruction's standards document.

Prioritized Standards

Operations and Algebraic Thinking

Use the four operations with whole numbers to solve problems:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.OA.1	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.	✓		✓	✓	✓	4
4.OA.3	Solve multi-step word problems posed with whole numbers and having whole number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity (variable). Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	✓	✓	✓	✓	✓	5

Gain familiarity with factors and multiples:

No standards were prioritized within this cluster.

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Generate and analyze patterns:

No standards were prioritized within this cluster.

Number and Operations in Base Ten (limited to whole numbers less than or equal to 1,000,000)

Generalize place value understanding for multi-digit whole numbers:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	✓	✓	✓	✓	✓	5
4.NBT.2	Read and write multi-digit whole numbers to the one millions place using base-ten numerals, word form, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	✓	✓	✓	✓	✓	5
4.NBT.3	Use place value and/or understanding of numbers to round multi-digit whole numbers to any place.	✓	✓	✓	✓	✓	5

Use place value understanding and properties of operations to perform multi-digit arithmetic:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.NBT.4	Fluently add and subtract multi-digit whole numbers to the one millions place using strategies flexibly, including the standard algorithm.	✓	✓	✓	✓	✓	5
4.NBT.5	Using strategies based on place value and the properties of operations, multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	✓	✓	✓	✓	✓	5
4.NBT.6	Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and	✓		✓	✓	✓	4

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	explain the calculation by using equations, rectangular arrays, and/or area models.						
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Number and Operations – Fractions (limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100)

Extend understanding of fraction equivalence and ordering:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.NF.1	Using visual fraction models, explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$. Use this principle to recognize and generate equivalent fractions. Attention should focus on how the number and size of the parts differ even though the two fractions themselves are the same size.	✓	✓	✓	✓	✓	5
4.NF.2	By creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$, compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.	✓	✓	✓	✓	✓	5

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.NF.3	Understand a fraction a/b with $a > 1$ as a sum of unit fractions $1/b$. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition with an equation. Justify decompositions by using a visual fraction model or other strategies.	✓	✓	✓	✓	✓	5

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	c. Add and subtract mixed numbers with like denominators. d. Using visual fraction models and equations, solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.						
4.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. a. Understand a fraction a/b as a multiple of $1/b$. b. Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. c. Using visual fraction models and equations, solve word problems involving multiplication of a fraction by a whole number.	✓		✓	✓	✓	4

Measurement and Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.MD.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb., oz.; l, ml; hr., min., sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	✓	✓	✓	✓	✓	5
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Using diagrams such as number line diagrams that feature a measurement scale, to represent measurement quantities.	✓	✓	✓	✓	✓	5

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Represent and interpret data:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	✓	✓	✓	✓	✓	5

Geometric measurement: understand concepts of angle and measure angles:

No standards were prioritized within this cluster.

Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
4.G.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size. Recognize right triangles as a category, and identify right triangles.	✓		✓	✓	✓	4
4.G.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures. Draw lines of symmetry.	✓	✓	✓	✓	✓	5

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