

# North Dakota Mathematics Content Standards

## Grade 6 Prioritized Standards

Northeast Education Services Cooperative (NESC) - 2017



## How to Read This Document

Example: 6.RP.1

"6.RP.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

### Ratios and Proportional Relationships

Understand ratio concepts and use ratio reasoning to solve problems:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	✓	✓	✓	✓	✓	5
6.RP.2	Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ , and use rate language in the context of a ratio relationship.	✓	✓	✓	✓	✓	5
6.RP.3	Use tables of equivalent ratios, tape diagrams, double number line diagrams, and equations to reason about ratios and rates in real world and mathematical problems. a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. (NESC note: Coordinate plane not prioritized) Use tables to compare ratios.	✓	✓	✓	✓	✓	5

For more information about this document or the prioritization process please contact the NESC:

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	b. Solve unit rate problems including those involving unit pricing and constant speed. c. Find a percent of a quantity as a rate per 100. Solve problems involving finding the whole, given a part and the percent. (NESC note: Find missing percent using an equivalent ratio.) d. Use ratio reasoning to convert measurement units. (NESC note: Set up as a ratio, not a unit analysis.) Manipulate and transform units appropriately when multiplying or dividing quantities.						
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### The Number System

Apply and extend previous understandings of multiplication and division to divide fractions by fractions:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.NS.1	Use visual fraction models and equations to interpret and compute quotients of fractions. Use models and equations to solve word problems involving division of fractions by fractions.	✓	✓	✓	✓	✓	5

Compute fluently with multi-digit numbers and find common factors and multiples:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.NS.2	Fluently divide multi-digit numbers using strategies flexibly, including the standard algorithm.	✓	✓	✓	✓	✓	5
6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using strategies flexibly, including the standard algorithm for each operation.	✓	✓	✓	✓	✓	5

Apply and extend previous understandings of numbers to the system of rational numbers:

No standards were prioritized within this cluster.

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## Expressions and Equations

Apply and extend previous understandings of arithmetic to algebraic expressions:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.EE.1	Write and evaluate numerical expressions involving whole-number exponents.	✓	✓	✓	✓	✓	5
6.EE.2	Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers and with letters standing for numbers. b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient, difference, quantity, etc.); view one or more parts of an expression as a single entity. c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	✓	✓	✓	✓	✓	5
6.EE.3	Apply the properties of operations to generate equivalent expressions.	✓	✓	✓	✓	✓	5
6.EE.4	Identify when two expressions are equivalent.	✓	✓	✓	✓	✓	5

Reason about and solve one-variable equations and inequalities:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.EE.5	Understand solving an equation or inequality as a process of answering a question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	✓	✓	✓	✓	✓	5

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6.EE.6	Use variables to represent numbers and write expressions when solving a real world or mathematical problem. Understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	✓	✓	✓	✓	✓	5
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Represent and analyze quantitative relationships between dependent and independent variables:  
No standards were prioritized within this cluster.

## Geometry

Solve real world and mathematical problems involving area, surface area, and volume:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.G.1	Based on prior knowledge of area of rectangles, decompose or compose triangles to find the area of a triangle. Using knowledge of area of triangles and rectangles, compose and/or decompose triangles, special quadrilaterals, and polygons to find their areas. Apply these techniques in the context of solving real world mathematical problems.	✓	✓	✓	✓		4
6.G.2	Using cubes of an appropriate size, pack a right rectangular prism having fractional edge lengths to find its volume. Then show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = \ell wh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real world and mathematical problems.	✓	✓	✓	✓	✓	5

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## Statistics and Probability

Develop understanding of statistical variability:

Code	Standard	Endurance	Leverage	Readiness	Assessment	Teacher Judgement	Total Score
6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	✓	✓	✓	✓	✓	5
6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values using a single number, while a measure of spread (variation) describes how its values vary with a single number.	✓	✓	✓	✓	✓	5

Summarize and describe distributions:

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