

Northpoint Horizons

Math Elevations™ (Comprehensive Intervention System)
Correlated to
Alaska Content and Performance Standards

This document provides a sampling of the extensive math directives offered throughout the *Math Elevations* program that meet **Alaska Content and Performance Standards**.

Alaska Content and Performance Standards Grade 6	Math Elevations Level F Teacher's Guide Examples/Lessons
Numeration	
<ul style="list-style-type: none"> • of fractions (proper or mixed numbers), decimals, percents (whole number), or integers by [6] N-1 reading, writing, ordering, or [counting L] (M1.2.1) 	Unit 1 – Lesson 1: <i>Decimals</i> pp. 18-19 Unit 3 – Lesson 1: <i>Simplest Form</i> pp. 54-55 Unit 3 – Lesson 2: <i>Comparing and Ordering Fractions</i> pp. 56-57 Unit 3 – Lesson 3: <i>Converting Fractions to Decimals</i> pp. 58-59 Unit 3 – Lesson 4: <i>Understanding Percents</i> pp. 60-61 Unit 3 – Lesson 5: <i>Converting Between Percents, Fractions, and Decimals</i> pp. 62-63 Unit 3 – Lesson 6: <i>More Converting Fractions</i> pp. 64-65
<ul style="list-style-type: none"> • of fractions (proper or mixed numbers), decimals, percents (whole number), or integers by [6] N-2 identifying place value positions from thousandths to millions (L) (M1.2.2) 	Unit 1 – Lesson 1: <i>Decimals</i> pp. 18-19
<ul style="list-style-type: none"> • of fractions (proper or mixed numbers), decimals, percents (whole number), or integers by [6] N-3 converting between whole numbers written in expanded notation and standard form (M1.2.4) 	Unit 1 – Lesson 3: <i>Powers of 10</i> pp. 22-23
<ul style="list-style-type: none"> • of fractions, mixed numbers, or percents by [6] N-4 [modeling L], identifying, describing, or illustrating equal parts of a whole, a region, or a set (M1.2.4) 	Unit 3 – Lesson 1: <i>Simplest Form</i> pp. 54-55 Unit 3 –

	Lesson 2: <i>Comparing and Ordering Fractions</i> pp. 56-57
• of fractions, mixed numbers, or percents by [6] N-5 [modeling L], identifying, describing, or illustrating equivalent fractions or mixed numbers (M1.2.4 & M3.2.5)	Unit 3 – Lesson 1: <i>Simplest Form</i> pp. 54-55
Understanding Meaning of Operations	
[6] N-6 [using models, explanations, number lines, or real-life situations L] describing or illustrating the relationships among the four basic operations (M1.2.3)	Unit 5 – Lesson 1: <i>Order of Operations</i> pp. 90-91
[6] N-7 [using models, explanations, number lines, or real-life situations L] describing or illustrating the process of adding and subtracting fractions with different denominators (M1.2.5)	Unit 4 – Lesson 1: <i>Addition and Subtraction of Fractions</i> pp. 72-73
Number Theory	
[6] N-8 describing or illustrating commutative, [associative, inverse L] or identity properties of addition or multiplication using models or explanations (M1.2.7)	Level H Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77
[6] N-9 identifying or describing factors and multiples common to a pair or set of numbers (e.g., Least Common Multiple or Greatest Common Factor) (M1.2.6)	Unit 1 – Lesson 7: <i>Greatest Common Factor (GCF)</i> pp. 30-31 Unit 1 – Lesson 8: <i>Least Common Multiple (LCM)</i> pp. 32-33
[6] N-10 modeling (base 10 blocks) distributive property (L) (M1.3.6)	Level H Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77
Measurement	
The student demonstrates understanding of measurable attributes by [6] MEA-1 estimating length to the nearest eighth-inch or millimeter (L) (M2.2.1)	Level G Unit 7 – Lesson 8: <i>Volume of a Prism</i> pp. 206-208
[6] MEA-2 identifying equivalent measures within systems English • length (inches, feet, yards, miles) • weight (ounces, pounds, [tons L]) • volume (fluid ounces, cups, pints, quarts, gallons)	Level H Unit 4 – Lesson 2: <i>Writing and Solving Proportions</i> pp. 108-110 Level F Unit 7 – Lesson 8: <i>Volume</i> pp. 140-141

Metric <ul style="list-style-type: none"> length (millimeters, centimeters, meters, kilometers) volume (milliliters, liters) (M2.2.2) 	
[6] MEA-3 using a scaled ruler to an eighth of an inch or millimeter on a map or drawing (M2.2.1 & M2.2.3)	Level E Unit 6 – Lesson 3: <i>Perimeter of Irregular Shapes</i> pp. 112-113
[6] MEA-4 calculating elapsed time (minutes, hours) (M2.2.5)	Level C Unit 7 – Lesson 1: <i>Time</i> pp. 126-127
[6] MEA-5 solving real-world problems involving elapsed time between U.S. time zones (including Alaska Standard time) (M2.2.5)	Level C Unit 7 – Lesson 1: <i>Time</i> pp. 126-127
[6] MEA-6 converting and using equivalent measurements within the same system (M2.2.2)	Level E Unit 6 – Lesson 7: <i>Converting Within the Metric System</i> pp. 120-121 Unit 6 – Lesson 8: <i>Converting Within the Customary System</i> pp. 122-123
[6] MEA-7 measuring length to the nearest of an inch or nearest millimeter (M2.2.1)	Level D Unit 6 – Lesson 8: <i>Appropriate Units</i> pp. 122-123
Estimation and Computation: Perform basic arithmetic functions, make reasoned estimates, and select and use appropriate methods or tools	
Estimation	
[6] E&C-1 identifying or using [a variety of L] strategies (e.g., truncating, rounding to compatible numbers) to estimate the results of addition, subtraction or multiplication from thousandths to millions or simple division (M3.2.1)	Unit 2 – Lesson 3: <i>Addition and Subtraction</i> pp. 40-41 Unit 2 – Lesson 6: <i>Multiplying by Decimals</i> pp. 46-47
Computation	
[6] E&C-2 recalling basic addition, subtraction, multiplication, and division facts efficiently (L) (M3.2.2)	Unit 2 – Lesson 3: <i>Addition and Subtraction</i> pp. 40-41 Unit 2 – Lesson 5: <i>Multiplication of Whole Numbers</i> pp. 44-45 Unit 2 – Lesson 7: <i>Division</i> pp. 48-49
[6] E&C-3 adding or subtracting whole numbers, fractions with unlike denominators to 12, or decimals to the hundredths place (M3.2.3)	Unit 2 – Lesson 3: <i>Addition and Subtraction</i> pp. 40-41

	Unit 4 – Lesson 1: <i>Addition and Subtraction of Fractions</i> pp. 72-73
[6] E&C-4 multiplying whole numbers by two- or three-digit numbers, dividing three-digit numbers by one- or two-digit numbers, or multiplying or dividing decimals that represent money by whole numbers, or multiplying or dividing proper fractions (M3.2.4)	Unit 2 – Lesson 5: <i>Multiplication of Whole Numbers</i> pp. 44-45 Unit 2 – Lesson 6: <i>Multiplying by Decimals</i> pp. 46-47 Unit 2 – Lesson 7: <i>Division</i> pp. 48-49 Unit 4 – Lesson 4: <i>Multiplying Fractions</i> pp. 78-79 Unit 4 – Lesson 6: <i>Dividing Fractions by Whole Numbers</i> pp. 82-83 Unit 4 – Lesson 7: <i>Dividing Fractions by Fractions</i> pp. 84-85
[6] E&C-5 developing or interpreting scale models (scale factors such as 1 in. = 1 ft.) (L) (M3.2.6)	Unit 3 – Lesson 7: <i>Ratios and Proportions</i> pp. 66-67 Unit 3 – Lesson 8: <i>Solving Proportions</i> pp. 68-69
Functions and Relationships: Represent, analyze, and use patterns, relations, and functions	
[6] F&R-1 extending patterns (found in the number system, formed by multiples, factors, perfect squares up to 100, powers of ten), up to 10 terms, represented in tables, sequences, or in problem situations (M4.2.1)	Unit 5 – Lesson 2: <i>Patterns</i> pp. 92-93
[6] F&R-2 using rules to express the generalization of a pattern using words, lists, or tables, with or without variables (M4.2.4)	Unit 5 – Lesson 2: <i>Patterns</i> pp. 92-93
[6] F&R-3 identifying or applying multiplication or division patterns to find missing values in a function (M4.2.2)	Unit 5 – Lesson 2: <i>Patterns</i> pp. 92-93
[6] F&R-4 using manipulatives, including a calculator, as tools when describing, extending, or representing a number sequence (L) (M4.2.1 & M 4.2.3)	Unit 5 – Lesson 2: <i>Patterns</i> pp. 92-93
Modeling and Solving Equations and Inequalities	
[6] F&R-5 solving for an unknown represented by a letter, (addition, subtraction, multiplication, or division) (e.g., $3 \cdot n = 15$, $n - 5 = 12$) (M4.2.5)	Unit 5 – Lesson 3: <i>One-Step Algebraic Expressions</i> pp. 94-95 Unit 5 – Lesson 4: <i>Two-Step Algebraic Expressions</i> pp. 96-97 Unit 5 – Lesson 5: <i>Solving Equations</i> pp. 98-99
Geometry: Construct, transform, and analyze geometric figures	

[6] G-1 using the attributes and properties (sides and angles) of regular polygons to identify, classify, or compare regular or irregular polygons (M5.2.1)	Unit 6 – Lesson 1: <i>Properties of Polygons</i> pp. 108-109
[6] G-2 identifying, comparing, or describing attributes and properties of circles (radius and diameter) (M5.2.2)	Unit 6 – Lesson 4: <i>Circles</i> pp. 114-115
[6] G-3 using the attributes and properties of prisms (vertices, length and alignment of edges, shape and number of bases, shape of faces) to [model L], identify, compare, or describe triangular or rectangular prisms (M5.2.2)	Unit 6 – Lesson 3: <i>Solid Figures</i> pp. 112-113
[6] G-4 identifying a 3-dimensional shape from the 2-dimensional drawing of the shape (M5.2.2)	Level G Unit 6 – Lesson 8: <i>Solid Figures</i> pp. 179-181
Similarity, Congruence, Symmetry, and Transformation of Shapes	
[6] G-5 identifying, creating, or drawing geometric figures that are congruent, similar, or symmetrical (M5.2.3)	Unit 6 – Lesson 6: <i>Translation</i> pp. 118-119 Unit 6 – Lesson 7: <i>Reflection</i> pp. 120-121 Unit 6 – Lesson 8: <i>Rotation</i> pp. 122-123
[6] G-6 drawing or describing the results of transformations of polygons such as slides, turns, or flips (L) (M5.2.5)	Unit 6 – Lesson 6: <i>Translation</i> pp. 118-119 Unit 6 – Lesson 7: <i>Reflection</i> pp. 120-121 Unit 6 – Lesson 8: <i>Rotation</i> pp. 122-123
Perimeter, Area, Volume, and Surface Area	
[6] G-7 estimating or determining area or perimeter of polygons (parallelograms, trapezoids, triangles) using a key, ruler, or given measures (M5.2.4)	Unit 7 – Lesson 2: <i>Perimeter</i> pp. 128-129 Unit 7 – Lesson 5: <i>Areas of Rectangles and Parallelograms</i> pp. 134-135 Unit 7 – Lesson 6: <i>Area of Triangles</i> pp. 136-137 Unit 7 – Lesson 7: <i>Area of Irregular Figures</i> pp. 138-139
[6] G-8 estimating the area and circumference of a circle using a grid or manipulatives and comparing the relationship of the diameter to the circumference (π) (L) (M5.2.4 & M5.3.4)	Unit 6 – Lesson 4: <i>Circles</i> pp. 114-115
[6] G-9 [estimating or determining the volume of a right rectangular prism	Unit 7 –

using manipulatives and formulas (e.g., cereal box, sand box, planter) L] (M5.3.4)	Lesson 8: <i>Volume</i> pp. 140-141
Position and Direction	
[6] G-10 graphing a vertical or horizontal line segment (given whole number coordinates for its end points) on a coordinate grid and/or identifying its length or midpoint (e.g., using a map to trace a route and calculate distance) (M5.2.6 & M5.2.7)	Unit 6 – Lesson 5: <i>The Coordinate Plane</i> pp. 116-117
Construction	
[6] G-11 drawing or measuring quadrilaterals with given dimensions or angles (L) (M5.3.7)	Unit 6 – Lesson 2: <i>Classifying Quadrilaterals</i> pp. 110-111
Statistics and Probability: Formulate questions, gather and interpret data, and make predictions	
[6] S&P-1 [designing an investigation and collecting L], organizing, or displaying, using appropriate scale for data displays (tables, bar graphs, line graphs, or circle graphs), data in real-world problems (e.g., social studies, friends, or school), with whole numbers up to 100 (M6.2.1 & M6.2.2)	Unit 8 – Lesson 2: <i>Line Plots and Stem-and-Leaf Plots</i> pp. 146-147 Unit 8 – Lesson 3: <i>Scales and Bar Graphs</i> pp. 148-149 Unit 8 – Lesson 6: <i>Line Graphs</i> pp. 154-155
Analysis and Central Tendency	
[6] S&P-2 using information from a variety of displays (tables, bar graphs, line graphs, circle graphs, or Venn diagrams) (M6.2.2)	Unit 8 – Lesson 2: <i>Line Plots and Stem-and-Leaf Plots</i> pp. 146-147 Unit 8 – Lesson 3: <i>Scales and Bar Graphs</i> pp. 148-149 Unit 8 – Lesson 6: <i>Line Graphs</i> pp. 154-155
[6] S&P-3 using mean, median, mode, or range (M6.2.3)	Unit 8 – Lesson 1: <i>Mean, Mode, and Median</i> pp. 144-145
Probability	
[6] S&P-4 analyzing whether a game is mathematically fair or unfair by explaining the probability of all possible outcomes (L) (M6.2.4)	Unit 8 – Lesson 7: <i>Probability</i> pp. 156-157
[6] S&P-5 solving or identifying solutions to problems involving possible combinations (e.g., if ice cream sundaes come in 3 flavors with 2 possible toppings, how many different sundaes can be made using only one flavor of ice cream with one topping?) (M6.2.5)	Unit 8 – Lesson 7: <i>Probability</i> pp. 156-157
Problem Solving: Understand and be able to select and use a variety of problem-solving strategies	
[6] PS-1 selecting, modifying, and applying appropriate problem-solving strategies (e.g., graphing, Venn diagrams, tables, lists, working backwards,	Unit 8 – Lesson 5: <i>Displaying Data</i> pp. 152-153

guess and check, or extending a pattern) and verifying results (M7.2.2, M7.3.2)	
[6] PS-2 evaluating and interpreting solutions to problems (M7.3.3)	Unit 2 – Lesson 8: <i>Word Problems</i> pp. 50-51
Communication: Form and use appropriate methods to define and explain mathematical relationships	
[6] PS-3 representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or using appropriate vocabulary, symbols, and technology to explain mathematical solutions (M8.2.1, M8.2.2, & M8.2.3)	Unit 8 – Lesson 2: <i>Line Plots and Stem-and-Leaf Plots</i> pp. 146-147 Unit 8 – Lesson 3: <i>Scales and Bar Graphs</i> pp. 148-149
Reasoning: Use logic and reason to solve mathematical problems	
[6] PS-4 using informal deductive reasoning in concrete contexts; or justifying answers and mathematical strategies using examples (M9.3.1 & M9.3.3)	Unit 2 – Lesson 8: <i>Word Problems</i> pp. 50-51
Connections: Apply mathematical concepts and processes to situations within and outside of school	
[6] PS-5 using real-world contexts such as social studies, friends, school and community (M10.2.1, M10.2.2, & M10.3.2)	Unit 8 – Lesson 1: <i>Mean, Mode, and Median</i> pp. 144-145 Unit 8 – Lesson 5: <i>Displaying Data</i> pp. 152-153