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Alaska Math Performance Standards (Grade Level Expectations) Correlated to *Moving with Math Extensions Grade 6*

		Student Book	Skill Builders
	CONTENT STANDARD A:		
	Mathematical facts, concepts, principles, and theories		
	NUMERATION		
	Understand and use numeration		
	Understanding Numbers		
	The student demonstrates conceptual understanding.		
•	of fractions (proper or mixed numbers), decimals, percents (whole number), or integers by		
6N-1	reading, writing, ordering, or counting.	2, 25, 35-38	2-1, 13-1, 14-1, 22-1, 24-1, 29-1
6N-2	identifying place value positions from thousandths to millions	1, 37	1-1, 23-2
6N-3	converting between whole numbers written in expanded notation and standard form		
•	of fractions, mixed numbers, or percents by		
6N-4	equal parts of a whole, a region, or a set	20, 23	11-1
6N-5	equivalent fractions or mixed numbers	23, 24	12-1
	Understanding Meaning of Operations		
	The student demonstrates conceptual understanding of mathematical operations by		
6N-6	using models, explanations, number lines, or real-life situations describing or illustrating the relationships among the four basic operations	9, 16	45-1
6N-7	using models, explanations, number lines, or real-life situations describing or illustrating the process of adding and subtracting fractions with different denominators	30, 31	17-1
	Number Theory		
	The student demonstrates conceptual understanding of number theory by		
6N-8	describing or illustrating commutative, (associative, inverse) or identity properties of addition or multiplication using models or explanations	4	5-1 5-2

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6N-9	identifying or describing factors and multiples common to a pair or set of numbers (e.g., Least Common Multiples or Greatest Common Factor)	24 (T.G.), 31	17-2
6N-10	modeling (base 10 blocks) distributive property		
	MEASUREMENT		
	Select ad use systems, units, and tools of measurement		
	Measurable Attributes		
	The student demonstrates understanding of measurable attributes by		
6MEA-1	estimating length to the nearest eighth-inch or millimeter		36-2
6MEA-2	identifying equivalent measures within systems		
	English		
	• length (inches, feet, yards, miles)		
	• weight (ounces, pounds, tons)	60	
	• volume (fluid ounces, cups, pints, quarts, gallons)		42-1
	Metric		
	• length (millimeters, centimeters, meters, kilometers)		
	• volume (milliliters, liters)		
	Measurable Techniques		
	The student demonstrates ability to use measurement techniques by		
6MEA-3	using a scaled ruler to an eighth of an inch or millimeter on a map or drawing		36-2
6MEA-4	calculating elapsed time (minutes, hours)	59	40-1
6MEA-5	solving real-world problems involving elapsed time between U.S. time zone (including Alaska Standard time)		
6MEA-6	converting and using equivalent measurements within the same system	60	41-1
6MEA-7	measuring length to the nearest 1/8 of an inch or nearest millimeter		36-2
	ESTIMATION AND COMPUTATION		
	Perform basic arithmetic functions, make reasoned estimates, and select and use appropriate methods or tools		
	Estimation		
	The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by		

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6E&C-1	identifying or using a variety of strategies (e.g., truncating, rounding to compatible numbers) to estimate the results of addition, subtraction or multiplication from thousandths to millions or simple division	7, 8, 14, 21	49-1, 49-2, 50-1, 50-2
	Computation		
	The student accurately solves problems (including real-world situations) by		
6E&C-2	recalling basic addition, subtraction, multiplication, and division facts efficiently	5, 6, 17	
6E&C-3	adding or subtracting whole numbers, fractions with unlike denominators to 12, or decimals to the hundredths place	5, 6, 30, 31, 42	6-1, 7-1, 17-1, 17-2, 26-1
6E&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	10, 11, 13, 34, 44	8-1, 9-1, 10-2, 19-1, 27-1
6E&C-5	developing or interpreting scale models (scale factors such as 1 in. = 1ft)		
	FUNCTIONS AND RELATIONSHIPS		
	Represent, analyze, and use patterns, relations, and functions		
	Describing Patterns and Functions		
	The student demonstrates conceptual understanding of functions, patterns, or sequences by		
6F&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		44-1
6F&R-2	using rules to express the generalization of a pattern using words, lists, or tables, with or without variables		
6F&R-3	identifying or applying multiplication or division patterns to find missing values in a function		
6F&R-4	using manipulatives, including calculator, as tools when describing, extending, or representing a number sequence		
	Modeling and Solving Equations and Inequalities		
	The student demonstrates algebraic thinking by		
6F&R-5	solving for an unknown represented by a letter (addition, subtraction, multiplication, or division) (e.g., 3 • n = 15, n - 5 = 12)		45-5
	GEOMETRY		
	Construct, transform, and analyze geometric figures		

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	Geometric Relationships		
	The student demonstrates an understanding of geometric relationships by		
6G-1	using the attributes and properties (sides and angles) of regular polygons to identify, classify, or compare regular or irregular polygons	53	34-1
6G-2	identifying, comparing, or describing attributes and properties of circles (radius and diameter)	54	35-1
6G-3	using the attributes and properties of prisms (vertices, length and alignment of edges, shape and number of bass, shape of face) to model, identify, compare, or describe triangular or rectangular prisms		39-2
6G-4	identifying a 3-dimensional shape from the 2-dimensional drawing of the shape		39-1, 39-2
	Similarity, Congruence, Symmetry, and Transformation of Shapes		
	The student demonstrates conceptual understanding of similarity, congruence, symmetry, or transformations of shapes by		
6G-5	identifying, creating, or drawing geometric figures that are congruent, similar, or symmetrical		
6G-6	drawing or describing the results of transformations of polygons such as slides, turns, or flips		
	Perimeter Area, Volume, and Surface Area		
	The student solves problems (including real-world situations) by using perimeter, area, or volume by		
6G-7	estimating or determining area or perimeter of polygons (parallelograms, trapezoids, triangles) using a key, ruler, or given measures	56, 57	38-1
6G-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)	54	38-2
6G-9	estimating or determining the volume of a right rectangular prism using maniplatives and formulas (e.g., cereal box, sand box, planter box	58	
	Position and Direction		
	The student demonstrates understanding of position and direction by		
6G-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)	61	

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	Construction		
	The student demonstrates a conceptual understanding of geometric drawings or constructions by		
6G-11	drawing or measuring quadrilaterals with given dimensions or angles	51	37-1
	STATISTICS AND PROBABILITY		
	Formulate questions, gather and interpret data, and make predictions		
	Data Display		
	The student demonstrates an ability to classify and organize data by		
6S&P-1	designing an investigation and collecting, 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)	19	
	Analysis and Central Tendency		
	The student demonstrates an ability to analyze data (comparing, explaining, interpreting, evaluation; drawing or justifying conclusions) by		
6S&P-2	using information from a variety of displays (tables, bar graphs, line graphs, circle graphs, or Venn diagrams)	62-64	47-1, 48-1
6S&P-3	using mean, median, mode, or range	18, 19	46-1
	Probability		
	The student demonstrates a conceptual understanding of probability and counting techniques by		
6S&P-4	analyzing whether a game is mathematically fair or unfair by explaining the probability of all possible outcomes		47-2
6S&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?)		
	CONTENT STANDARDS B, C, D AND E		
	Process skills and abilities applying conceptual knowledge and skills as designated in all strands of Content Standard A by problem solving, communicating, reasoning, and making connections		
	Problem Solving		
	Understand and be able to select and use a variety of problem-solving strategies		

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	The student demonstrates an ability to problem solve by		
6PS-1	selecting, modifying, and applying appropriate problem-solving strategies (e.g., graphing, Venn diagrams, tables, lists, working backwards, guess and check, or extending a pattern) and verifying results	17	45-2
6PS-2	evaluating and interpreting solutions to problems	21, 23, 30	
	Communication		
	Form and use appropriate methods to define ad explain mathematical relationships		
	The student communicates his or her mathematical thinking by		
6PS-3	representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or using appropriate vocabulary, symbols, and technology to explain mathematical solutions	23, 34, 50	
	Reasoning		
	Use logic and reason to solve mathematical problems		
	The student demonstrates an ability to use logic and reason by		
6PS-4	using informal deductive reasoning in concrete contexts; or justifying answers and mathematical strategies using examples	4, 30	
	Connections		
	Apply mathematical concepts and processes to situations within and outside of school		
	The student demonstrates the ability to apply mathematical skills and processes across the content strands by		
6PS-5	using real-world contexts such as social studies, friends, school and community	2, 50	