

SIXTH GRADE ALASKA GLE CHECKLIST

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| | NUMERATION | | | | | | | |
| N-1 | Read, write, order, and count fractions, decimals, percents or integers. | | | | | | | |
| N-2 | Identify place value positions from thousandths to millions. | | | | | | | |
| N-3 | Convert between whole num. in expanded notation and standard form. | | | | | | | |
| N-4 | Identify, describe, or illustrate equal parts of a whole, a region, or a set. | | | | | | | |
| N-5 | Identify, describe, or illustrate equivalent fractions or mixed numbers. | | | | | | | |
| N-6 | Describe/illustrate relation between 4 basic operations | | | | | | | |
| N-7 | Describe/illustrate add & sub of fractions with different denominators | | | | | | | |
| N-8 | Describe or illustrate commut., [associative, inverse*], or identity properties of addition or multiplication using models or explanations. | | | | | | | |
| N-9 | Identify or describe factors and multiples common to a set of num. (LCM or GCF). | | | | | | | |
| N-10 | Model (base 10 blocks) distributive property. | | | | | | | |
| | MEASUREMENT | | | | | | | |
| MEA-1 | Estimate length to the nearest eighth-inch or millimeter. | | | | | | | |
| MEA-2 | Identify equivalent measures within systems: English—length (in, ft, yds, miles), weight (oz, lbs, [tons*]), volume (fluid ounces, cups, pints, quarts, gallons); Metric—length (mm, cm, m, km), volume (l, ml) | | | | | | | |
| MEA-3 | Use a scaled ruler to an eighth of an inch or mm on a map or drawing. | | | | | | | |
| MEA-4 | Calculate elapsed time (minutes, hours). | | | | | | | |
| MEA-5 | Solve real-world problems involving elapsed time between U.S. time zones (including Alaska Standard time). | | | | | | | |
| MEA-6 | Convert and use equivalent measurements within the same system. | | | | | | | |
| MEA-7 | Measure length to the nearest 1/8 inch or nearest millimeter. | | | | | | | |
| | ESTIMATION AND COMPUTATION | | | | | | | |
| E&C-1 | Identify or use [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. | | | | | | | |
| E&C-2 | Recall basic add, sub, multip, and div facts efficiently. | | | | | | | |
| E&C-3 | Add or subtract whole numbers, fractions with unlike denominators to 12, or decimals to the hundredths place. | | | | | | | |
| E&C-4 | Multiply whole numbers by two- or three-digit numbers, divide three-digit numbers by one- or two-digit numbers, or multiply or divide decimals that represent money by whole numbers or mult. and div. proper fractions. | | | | | | | |
| E&C-5 | Develop or interpret scale models (scale factors such as 1 in. = 1 ft.). | | | | | | | |
| | FUNCTIONS AND RELATIONSHIPS | | | | | | | |
| F&R-1 | Extend 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. | | | | | | | |
| F&R-2 | Use rules to express the generalization of a pattern using words, lists, or tables, with or without variables. | | | | | | | |
| F&R-3 | Identify or apply multiplication or division patterns to find missing values in a function. | | | | | | | |
| F&R-4 | Use manipulatives, including a calculator, as tools when describing, extending, or representing a number sequence. | | | | | | | |
| F&R-5 | Solve for an unknown represented by a letter (addition, subtraction, multiplication, or division) (e.g., $3 \times n = 15$, $n - 5 = 12$). | | | | | | | |

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| GEOMETRY | | | | | | | | |
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| G-1 | Use the attributes and properties (sides, angles) of regular polygons to identify, classify, or compare regular or irregular polygons. | | | | | | | |
| G-2 | Identify, compare, or describe attributes and properties of circles (radius and diameter). | | | | | | | |
| G-3 | Use the attributes and properties of prisms (vertices, length and alignment of edges, shape and number of bases, shape of faces) to [model*], identify, compare, or describe triangular or rectangular prisms. | | | | | | | |
| G-4 | Identify a 3-dimensional shape from the 2-dimensional drawing. | | | | | | | |
| G-5 | Identify, create, or draw geometric figures that are congruent, similar, or symmetrical. | | | | | | | |
| G-6 | Draw or describe the results of transformations of polygons such as slides, turns, or flips. | | | | | | | |
| G-7 | Estimate or determine area or perimeter of polygons (parallelograms, trapezoids, triangles) using a key, ruler, or given measures. | | | | | | | |
| G-8 | Estimate the area and circumference of a circle using a grid or manipulatives and compare the relationship of the diameter to the circumference (π). | | | | | | | |
| G-9 | Estimate/determine the volume of a right rectangular prism using manipulatives and formulas (e.g., cereal box, sand box, planter). | | | | | | | |
| G-10 | Graph a vertical or horizontal line segment (given whole number coordinates for its endpoints) on a coordinate grid and/or identify its length and midpoint (e.g., use a map to trace a route and calculate distance). | | | | | | | |
| G-11 | Drawing or measuring quadrilaterals with given dimentions or angles | | | | | | | |
| STATISTICS AND PROBABILITY | | | | | | | | |
| S&P-1 | Design an investigation and collect*, organize, or display, using appropriate scale for data displays (tables, bar graphs, line graphs, circle graphs), data in real-world problems (e.g., social studies, friends, or school) with whole numbers up to 100. | | | | | | | |
| S&P-2 | Use information from a variety of displays (tables, bar graphs, line graphs, circle graphs, or Venn diagrams). | | | | | | | |
| S&P-3 | Use mean, median, mode, or range. | | | | | | | |
| S&P-4 | Analyze whether a game is mathematically fair or unfair by explaining the probability of all possible outcomes. | | | | | | | |
| S&P-5 | Solve or identify 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?). | | | | | | | |
| PROBLEM SOLVING | | | | | | | | |
| PS-1 | Select, modify, & apply appropriate problem-solving strategies (e.g., graphing, Venn diagrams, tables, lists, working backwards, guess and check, or extending a pattern) and verify results. | | | | | | | |
| PS-2 | Evaluate and interpret solutions to problems. | | | | | | | |
| PS-3 | Represent problems using mathematical language including concrete, pictorial, and/or symbolic representation; or use appropriate vocabulary, symbols, and technology to explain mathematical solutions. | | | | | | | |
| PS-4 | Use informal deductive reasoning in concrete contexts; or justify answers and mathematical strategies using examples. | | | | | | | |
| PS-5 | Understand & apply mathematical skills & processes in real-world contexts such as social studies, friends, school, and community. | | | | | | | |