

ISTEP+: Grade 4 Mathematics Blueprint Beginning Spring 2016

The grade 4 mathematics assessment is divided into five categories for reporting student achievement. Age-appropriate concepts are assessed within each category.

| Reporting Category | Description | Percent Range* |
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| Number Sense | Questions may include understanding equivalent forms of whole numbers up to 1,000,000, comparing two numbers up to 1,000,000, understanding and comparing fractions, whole numbers, mixed numbers and improper fractions, understanding the relationship between decimals and fractions, comparing the size of two decimals to hundredths, understanding factors of whole numbers from 1-100, and rounding any multi-digit whole number to any place within 1,000,000. | 12-22% |
| Computation | Questions may include adding and subtracting fluently, multiplying within 100 fluently, multiplying a 4-digit number by a 1-digit number or two 2-digit numbers, dividing a 4-digit dividend by a 1-digit divisor with remainders, adding and subtracting fractions and mixed numbers with common denominators, and understanding the commutative, associative, and distributive properties. | 16-26% |
| Algebraic Thinking and Data Analysis | Questions may include solving real-world addition and subtraction problems, understanding the relationships between the four operations, solving real-world problems involving multiplicative comparison, solving real-world problems involving the addition and subtraction of fractions with common denominators, understanding how to use simple equations to generate number patterns, identifying questions that can be addressed with data, creating scaled graphs and tables, creating line plots with data measures in fractions of a unit, solving addition and subtraction of fraction problems based on data found in line plots, and interpreting data found in circle graphs. | 18-28% |
| Geometry and Measurement | Questions may include identifying, describing, and drawing parallelograms, rhombuses, and trapezoids, recognizing and drawing lines of symmetry, identifying and drawing rays, angles, parallel and perpendicular lines, and classifying triangles based on attributes, measuring length to eighths of an inch and millimeters, understanding the relative sizes of measures within a measurement system, solving problems involving measurement by using the four operations, solving problems involving the area and perimeter of shapes, and measuring angles in whole number degrees. | 20-30% |
| Mathematical Process | Questions may include making sense of problems and persevering in solving them, reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, modeling, using appropriate tool strategically, attending to precision, and making use of structure. | 9-19% |

* This range represents the approximate emphasis for each reporting category on the assessment.