

ISTEP+: Grade 5 Mathematics 2015-16 Blueprint

The grade 5 mathematics assessment is divided into five categories for reporting student achievement. Age-appropriate concepts are assessed within each category.

Reporting Category	Description	Percent Range*
Number Sense	Questions may include using a number line to compare fractions, mixed numbers and decimals, explaining different ways to interpret a fraction, understanding the relationship between place value and powers of ten, rounding decimals up to thousandths to any place, and interpreting percents as part of a hundred.	4-14%
Computation	Questions may include multiplying multi-digit whole numbers fluently, dividing a 4-digit dividend by a 2-digit divisor with remainders, adding and subtracting fractions with unlike denominators, multiplying and dividing fractions by whole numbers, solving problems using the four operations with decimals to hundredths, and solving problems by applying the commutative, associative, and distributive properties.	20-30%
Algebraic Thinking and Data Analysis	Questions may include solving real-world multiplication and division problems, solving real-world problems involving fractions by using the four operations, solving real-world problems involving decimals to hundredths by using the four operations, graphing whole number coordinates on a coordinate plane, representing real-world problems by graphing or interpreting ordered pairs on a coordinate plane, evaluating linear expressions with up to two variables that are based on real-world problems, identifying questions that can be addressed with data, interpreting data from tables and graphs, making predictions based on data, and understanding measures of center and frequency to describe data.	22-32%
Geometry and Measurement	Questions may include identifying, describing, and drawing triangles and circles, understanding the relationship between radius and diameter, classifying polygons in a hierarchy based on properties, solving multi-step real-world problems based on conversions within a measurement system, finding the area of rectangles with fractional side lengths, solving real-world problems based on finding the area and perimeter of triangles, parallelograms, and trapezoids, and finding the volume of right rectangular prisms.	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.