

Grade 6 Mathematics

The grade 6 mathematics assessment presents a variety of items representing the six strands of the Wisconsin Model Academic Standards for Mathematics: Mathematical Processes (*Reasoning, Communication, Connections, Representation, Problem Solving*), Number Operations and Relationships, Geometry, Measurement, Statistics and Probability, and Algebraic Relationships. Assessment items in each category may appear without context and within the context of real-world situations. All test items are either selected-response (multiple-choice) or constructed response format. Some items require the use of mathematical tools including a set of tangrams, a protractor, a ruler with 1/16 inch and millimeter intervals, and a calculator (four-function calculator availability is required for most sessions of the test). Students performing at each level draw on a broad range of mathematical knowledge while applying skills and strategies to solve real-world and nonroutine mathematical problems. Each proficiency level presumes mastery at previous levels. *The descriptions provide examples, rather than a complete list, of knowledge and skills students may demonstrate at each level.*

Performance Level	WKCE-CRT Performance Level Descriptions and Scale Score Ranges
Advanced 532 and above	<p>At the beginning of the year, students at the Advanced level demonstrate in-depth understanding of academic knowledge and skills tested on the WKCE-CRT by:</p> <ul style="list-style-type: none"> • communicating mathematical ideas using reasoning and logic skills to solve real-world problems involving patterns. • clearly explaining mathematical strategies using correct terminology. • using mathematics in two-step real-world applications. • applying knowledge of place value to solve problems. • comparing and ordering fractions with unlike denominators. • identifying and representing equivalence of fractions, decimals and percents. • dividing whole numbers with double-digit divisors and 3-digit dividends. • analyzing and dividing numbers in a word problem using single-digit divisor and 4-digit dividends. • determining appropriate operations necessary to solve two-step real-world problems. • adding and simplifying fractions with unlike denominators. • identifying types of angles within a shape. • describing attributes of a right triangle. • classifying shapes with more than one line of symmetry. • designing a shape with exactly one line of symmetry. • identifying the three-dimensional shape that is made from a net (flat pattern) when only the net is illustrated. • locating a given coordinate on the first quadrant of a coordinate grid. • plotting the fourth vertex or point of a shape on the first quadrant of a coordinate grid. • converting length within the US customary system of measurement. • identifying appropriate US customary and metric units. • calculating elapsed time involving a.m. and p.m. • determining area from a smaller shape to a larger shape or when given two sides of a rectangle. • estimating measurements with non-standard units.

Performance Level	WKCE-CRT Performance Level Descriptions and Scale Score Ranges
	<ul style="list-style-type: none"> • calculating costs of real-world situations. • describing data from charts, graphs or number sets using mean , median, mode, and range. • describing the probability of events involving spinners when the spinner is provided or when a description of the spinner is provided using fractions. • extending a numeric or geometric pattern up to the 8th item. • representing a geometric pattern with another pattern. • recognizing a functional relationship between two variables displayed in a table. • solving an order of operations problem with a variable.
Proficient 485 –531	<p>At the beginning of the year, students at the Proficient level demonstrate competency in the academic knowledge and skills tested on the WKCE-CRT by:</p> <ul style="list-style-type: none"> • clearly communicating mathematical ideas used to solve problems. • providing explanations that contain some detail regarding mathematical ideas used to solve two-step problems. • calculating change under \$5.00 • identifying, comparing, and ordering whole numbers, fractions, decimals, and percents. • dividing in context using 3-digit dividends. • identifying angles as right, acute, or obtuse. • identifying the appropriate net (flat patterns) needed to make a specific three-dimensional shape. • stating the coordinates that make the vertices (corners) of a figure on a first quadrant coordinate grid. • converting within the system of time (minutes and seconds.) • using appropriate tools of measurement to measure real-world objects to the nearest 1/8 inch or millimeter. • describing a set of data using median, range and mode. • making and supporting reasonable conclusions and/or predictions from data. • extending a functional relationship involving multiplication and displayed in a table. • determining the probability of an event with fractions. • solving an equation involving multiple operations. • using the distributive property to solve mathematical problems.
Basic 464 –484	<p>At the beginning of the year, students at the Basic level demonstrate some academic knowledge and skills tested on the WKCE-CRT by:</p> <ul style="list-style-type: none"> • using words, numbers or symbols to explain the mathematical ideas used in single-step problems. • recognizing and applying place value concepts to number to the ten thousands place value. • describing a portion of a whole using fractions. • solving three-digit subtraction problems with regrouping without the use of a calculator. • solving word problems using basic multiplication and division without a calculator. • identifying a shape containing a line of symmetry when the line of symmetry is given.

Performance Level	WKCE-CRT Performance Level Descriptions and Scale Score Ranges
	<ul style="list-style-type: none"> • locating and labeling an ordered pair on the first quadrant of a coordinate grid. • identifying two- and three-dimensional figures. • comparing two points or values on a graph or chart. • reading and interpreting a scale using pounds. • describing a limited (5 or less) set of data in order using mode and range from a graph, chart or number text • determining the probability of simple events. • extending a numeric pattern when given the first four numbers. • solving problems involving order of operations and parentheses.
<p>Minimal Performance</p> <p>463 and below</p>	<p>At the beginning of the year, students at the Minimal level demonstrate very limited academic knowledge and skills tested on the WKCE-CRT by:</p> <ul style="list-style-type: none"> • explaining simple mathematical ideas using some detail. • using place value to express four-digit numbers in expanded notation. • solving basic multiplication fact problems without a calculator. • solving three- and four-digit addition and subtraction problems without a calculator. • identifying angles, polygons and lines of symmetry. • identifying the location of the x-axis and y-axis. • converting within the US customary system of measurement when provided a conversion table. • identifying the maximum and minimum values on a simple graph, chart, or number set. • using terms of likelihood to solve simple probability problems. • recognizing and extending a simple numeric or geometric pattern. • solving problems involving order of operations without parentheses. • using the communicative property of multiplication with positive single digits.