

**I AM Performance Level Descriptors (PLDs)
Grade 6 Mathematics**

	Content Connector	Below Proficiency	Approaching Proficiency	At Proficiency
Computation				
MA.6.C.1.a.1	Divide multi-digit whole numbers.	Given a visual representation, divides single-digit by single-digit whole numbers with no remainders.	Given a visual representation, divides double-digit whole numbers with no remainders.	Divides multi-digit whole numbers.
MA.6.C.2.a.1	Solve one-step addition or subtraction problems with decimals.	Solves one-step addition problems with decimals up to the hundredths.	Solves one-step addition or subtraction problems with decimals up to the hundredths.	Solves one-step addition or subtraction problems with decimals.
MA.6.C.2.a.2	Solve one-step addition or subtraction problems with fractions.	Solves one-step addition problems with fractions with like denominators.	Solves one-step addition or subtraction problems with fractions with like denominators.	Solves one-step addition or subtraction problems with fractions.
MA.6.C.3.a.1	Solve one-step real-world addition or subtraction problems with decimals or fractions.	Solves one-step real-world addition problems with decimals to the tenths or unit fractions with common one-digit denominators.	Solves one-step real-world addition or subtraction problems with fractions with common denominators or decimals to the hundredths.	Solves one-step real-world addition or subtraction problems with decimals or fractions.
MA.6.C.4.a.1	Solve one-step division problems with fractions.	Uses models to divide a whole number by a unit fraction to solve.	Uses models to divide a whole number by a fraction to solve.	Solves one-step division problems with fractions.
MA.6.C.5.a.1	Demonstrate what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$) and evaluate.	Identifies an exponent.	Demonstrates what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$).	Demonstrates what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$) and evaluates.
MA.6.C.6.a.1	Apply the order of operations.	Identifies the first step in the order of operations of a given problem.	Identifies at least two steps in the order of operations of a given problem.	Applies the order of operations.

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Algebra and Functions				
MA.6.AF.1.a.1	Given a real-world problem, evaluate the expressions for specific values of their variables.	Given a real-world problem, evaluates the expression for the specific value of one variable with a visual representation.	Given a real-world problem, evaluates the expressions for the specific values of up to two variables with a visual representation.	Given a real-world problem, evaluates the expressions for the specific values of their variables with a visual representation.
MA.6.AF.2.a.1	Use properties of operations to produce equivalent expressions.	Uses properties of operations to produce equivalent expressions using addition.	Uses properties of operations to produce equivalent expressions using addition and multiplication.	Uses properties of operations to produce equivalent expressions.
MA.6.AF.3.a.1	Write and evaluate variable expressions.	Identifies a variable expression.	Writes a variable expression.	Writes and evaluates variable expressions.
MA.6.AF.4.a.1	Use substitution to determine validity of an equation or inequality.	Determines whether the problem is an equation or an inequality.	Uses substitution (limited to single-digit numbers) to determine the validity of an equation or an inequality.	Uses substitution to determine the validity of an equation or inequality.
MA.6.AF.5.a.1	Solve real-world one-step linear equations.	Solves a given real-world one-step linear equations (limited to single-digit numbers) using addition and subtraction.	Solves real-world one-step linear equations (limited to single-digit numbers) using addition, subtraction, and multiplication.	Solves real-world one-step linear equations.
MA.6.AF.6.a.1	Given a real-world problem, write an inequality.	Given a real-world problem, writes an inequality using addition and subtraction.	Given a real-world problem, writes an inequality using addition, subtraction, and multiplication.	Given a real-world problem, writes an inequality.
MA.6.AF.7.a.1	Graph a point on a coordinate plane.	Attempts to graph a point in the first quadrant of a coordinate plane.	Graphs a point in the first quadrant of a coordinate plane.	Graphs a point on a coordinate plane.
MA.6.AF.8.a.1	Given a coordinate plane, plot and find the distance between two points with the same first	Given a coordinate plane with two plotted points in the first quadrant, finds the distance between two	Given a coordinate plane, plots two points in the first quadrant with the same first coordinate or	Given a coordinate plane, plots and finds the distance between two points with the same first

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	coordinate or the same second coordinate.	points with the same first coordinate or the same second coordinate. (For example: "The points (3, 2) and (3, 5) are plotted. What is the distance between the two points?")	the same second coordinate.	coordinate or the same second coordinate.
MA.6.AF.9.a.1	Analyze a table to find missing values of ordered pairs.	Given a table, identifies an ordered pair.	Given a table and the rule, finds one missing value of an ordered pair.	Analyzes a table to find one missing value of an ordered pair.
MA.6.AF.9.a.2	Plot pairs of values from a table onto a coordinate plane.	Given an ordered pair, plots the point onto a coordinate plane.	Given a table, plots an ordered pair onto a coordinate plane.	Given a table, plots ordered pairs onto a coordinate plane.
MA.6.AF.10.a.1	Given a real-world problem representing a proportional relationship, analyze the relationships between the dependent and independent variables.	Identifies a proportional relationship.	Given a real-world problem representing a proportional relationship, identifies a dependent or independent variable.	Given a real-world problem representing a proportional relationship, analyzes the relationships between the dependent and independent variables.
Number Sense				
MA.6.NS.1.a.1	Understand the difference between positive and negative numbers.	Identifies negative and positive numbers.	Understand the difference between positive or negative numbers when given a visual representation.	Understand the difference between positive and negative numbers.
MA.6.NS.2.a.1	Locate positive and negative numbers on a number line.	Given a labeled positive number line (0–5), locates positive numbers. Given a labeled negative number line (–5 to 0), locates negative numbers.	Locates positive or negative numbers on a labeled number line (from –10 to 10).	Locates positive and negative numbers on a number line.
MA.6.NS.3.a.1	Plot positive and negative integers on a number line.	Given a labeled positive number line (0–5), plots positive numbers. Given a labeled negative number line (–5 to 0), plots negative numbers.	Plots positive and negative numbers on a labeled number line (from –10 to 10).	Plots positive and negative numbers on a number line.

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MA.6.NS.3.a.2	Compare and order a given set of integers.	Using visual representation of two integers (one positive and one negative), compares to determine which integer is larger/smaller.	Compares and orders a given set of integers with visual representation (range from -10 to 10; limit set to 3 integers).	Compares and orders a given set of integers.
MA.6.NS.4.a.1	Find the absolute value of a number using the distance from zero on a number line.	Finds the absolute value of a positive number using the distance from zero on a number line.	Finds the absolute value of a negative number using the distance from zero on a number line.	Finds the absolute value of a number using the distance from zero on a number line.
MA.6.NS.5.a.1	Identify the decimal and percent equivalents for halves, fourths, fifths, and tenths.	Identifies the decimal and percent equivalents for hundredths with visual representation.	Identifies the decimal and percent equivalents for halves and tenths with visual representation.	Identifies the decimal and percent equivalents for halves, fourths, fifths, and tenths.
MA.6.NS.6.a.1	Identify a prime and composite number.	Given all factors for a number, determines whether that number is prime or composite.	For numbers up to 10, identifies prime or composite numbers.	Identifies prime and composite numbers.
MA.6.NS.7.a.1	Find the least common multiple.	Identifies multiples of a single-digit whole number.	Finds the least common multiple of two single-digit whole numbers.	Finds the least common multiple of two whole numbers.
MA.6.NS.7.a.2	Find the greatest common factor of two whole numbers.	Given all common factors of two whole numbers up to 50, identifies the greatest common factor.	Finds a common factor of two whole numbers up to 50.	Finds the greatest common factor of two whole numbers.

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MA.6.NS.8.a.1	Describe the ratio relationship between two quantities.	Given a visual representation, identifies the ratio.	When given a ratio, identifies the ratio in different forms (1:2, 1/2, 1 to 2).	Describes the ratio relationship between two quantities.
MA.6.NS.9.a.1	Understand the concept of a unit rate.	Given a visual representation, identifies a unit rate.	Matches a unit rate with an equivalent rate.	Understands the concept of a unit rate.
MA.6.NS.10.a.1	Solve one-step real-world problems involving unit rates with ratios of whole numbers when given the unit rate (e.g., "3 inches of snow falls per hour; how much in 6 hours?").	Given a visual representation, identifies a unit rate.	Solves a one-step problem involving unit rates with ratios of whole numbers when given the unit rate (limit unit rates to single-digit whole numbers).	Solves one-step real-world problems involving unit rates with ratios of whole numbers when given the unit rate (e.g., "3 inches of snow falls per hour; how much in 6 hours?").
Geometry, Measurement, Data Analysis and Statistics				
MA.6.DS.1.a.1	Identify statistical questions and the data that corresponds.	Identifies data from a graph.	Identifies questions that have a single data point.	Identifies statistical questions and the data that corresponds.
MA.6.DS.2.a.1	Name different graphical representations of data.	Names different graphical representations of a set of data (line plots and bar graphs).	Names different graphical representations of a set of data (line plots and box plots).	Names different graphical representations of a set of data (line plots, histograms, and box plots).
MA.6.DS.3.a.1	Collect and graph data using bar graphs and line plots.	Sorts given data.	Organizes given data and attempts to create a bar graph or line plot.	Collects and graphs data using bar graphs and line plots.
MA.6.DS.4.a.1	Select a statement that matches the mean, mode, and spread of data for 1 measure of central tendency of a data set.	Identifies range of a set of data.	Identifies range, mean, and mode of a set of data.	Selects a statement that matches the pattern of the range and either the mean or mode of a given set of data.

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MA.6.GM.1.a.1	Convert between English and metric measurement systems.	Identifies whether the data presented is in the English or metric system.	Converts between English and metric measurement systems given a conversion chart.	Converts between English and metric measurement systems.
MA.6.GM.2.a.1	Given a real-world situation, use the sum of the interior angles of a triangle which totals 180 degrees.	Identifies if a figure has three interior angles, then it is a triangle.	Recognizes a triangle as having 3 angle measures that add up to 180 degrees.	Given a real-world situation, uses the sum of the interior angles of a triangle, which totals 180 degrees, to solve problems.
MA.6.GM.3.a.1	Given a polygon in a coordinate plane, find the length of each side.	Given a polygon in the first quadrant in a coordinate plane, with one vertex on the origin and sides on the x - and y -axis, finds the length of one side.	Given a polygon with up to 4 sides in a coordinate plane, with a side on the y - or x -axis, finds the length of one side with the same first coordinate or the same second coordinate.	Given a polygon in a coordinate plane, finds the length of one side with the same first coordinate or the same second coordinate.
MA.6.GM.4.a.1	Find area of quadrilaterals.	Given a partially filled-in formula for area of a quadrilateral, identifies the missing number to complete the formula.	Given the formula for area of a quadrilateral, identifies the correct formula to solve for the area.	Finds area of quadrilaterals.
MA.6.GM.5.a.1	Find the volume of right rectangular prisms.	Given a partially filled-in formula for volume of a right rectangular prism, identifies the missing number to complete the formula.	Given the length, width, and height of right rectangular prisms, solves for the area of the base.	Finds the volume of right rectangular prisms.
MA.6.GM.5.a.2	Understand the concept of volume and how it fills space.	Attempts to recognize volume as filling in a three-dimensional shape.	Recognizes volume as filling in a three-dimensional shape.	Understands the concept of volume and how it fills space.
MA.6.GM.6.a.1	Identify the net of a three-dimensional shape.	Recognizes a right rectangular prism.	Recognizes a net is composed of two-dimensional shapes.	Identifies the net of a three-dimensional shape.

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Process Standards				
PS.1	Make sense of problems and persevere in solving them.	Identifies given quantities and unknowns for a given problem.	Identifies what question is asking, relevant or irrelevant information, and can set up solution method.	Makes sense of and solves problems.
PS.2	Reason abstractly and quantitatively.	Represents a problem using numbers and symbols.	Identifies a symbolic expression or equation that represents a problem situation.	Creates symbolic expressions or equations to represent problem situations.
PS.3	Construct viable arguments and critique the reasoning of others.	Identifies clearly invalid arguments, without justification or explanation.	Identifies the flaws in a given argument.	Constructs arguments and justifications for mathematical thinking, and critiques the reasoning of others.
PS.4	Model with mathematics.	Identifies parts of a real-world problem.	Creates a model to represent a real-world problem.	Applies math knowledge to solve real-world problems using a variety of models and representations and reflects to make sure the answer makes sense.
PS.5	Use appropriate tools strategically.	Recognizes familiar mathematic tools.	Uses familiar tools to aid mathematical process.	Uses relevant mathematical tools and external mathematical resources to communicate mathematical ideas.
PS.6	Attend to precision.	Identifies common mathematical definitions.	Uses common mathematical vocabulary to connect or explain simple mathematical concepts.	Communicates correct mathematical language with appropriate precision and context.
PS.7	Look for and make use of structure.	Identifies simple structures.	Identifies the rules for simple numeric and geometric structures, and uses those rules to extend a pattern.	Applies structural classifications and patterns to answer problems in a variety of ways.
PS.8	Look for and express regularity in repeated reasoning.	Identifies simple examples of repeated reasoning or patterns.	Identifies the rules exhibited in repeated reasoning or patterns.	Applies repeated reasoning to develop general methods, rules, and short-cuts for solving mathematical problems.