Middle School Mathematics Placement Assessment—Blueprint Summary

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				Middle School Math Placement Assessment	
			Status	Published	
			# Standards Assessed	39	
			Number of Items per Standard (max)	2	
			Number of Items per Standard (min)	1	
			Number of Items per Standard (avg)	1.1	
Standard	**Description**	**Yr #**	**Yr %**	**#**	**%**
Total		**44**	**100%**	**44**	**100%**
Common Core Item Bank					
MA.6.RP.A	Understand ratio concepts and use ratio reasoning to solve problems.	1	2.3%	1	2.3%
MA.6.RP.A.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	1	2.3%	1	2.3%
MA.6.RP.A.2	Understand the concept of a unit rate a/b associated with a ratio a:b with b is not equal to 0, and use rate language in the context of a ratio relationship.	1	2.3%	1	2.3%
MA.6.RP.A.3	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	1	2.3%	1	2.3%
MA.6.RP.A.3.a	Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	1	2.3%	1	2.3%
MA.6.RP.A.3.b	Solve unit rate problems including those involving unit pricing and constant speed.	1	2.3%	1	2.3%
MA.6.RP.A.3.c	Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	1	2.3%	1	2.3%
MA.6.NS.A	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.				
MA.6.NS.A.1	Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.	1	2.3%	1	2.3%
MA.6.NS.B	Compute fluently with multi-digit numbers and find common factors and multiples.	1	2.3%	1	2.3%

MA.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.	1	2.3%	1	2.3%
MA.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	2	4.5%	2	4.5%
MA.6.NS.B.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	1	2.3%	1	2.3%
MA.6.NS.C	Apply and extend previous understandings of numbers to the system of rational numbers.				
MA.6.NS.C.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	1	2.3%	1	2.3%
MA.6.NS.C.6.a	Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., -(-3) = 3, and that 0 is its own opposite.	1	2.3%	1	2.3%
MA.6.NS.C.6.b	Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	1	2.3%	1	2.3%
MA.6.NS.C.6.c	Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	1	2.3%	1	2.3%
MA.6.NS.C.7	Understand ordering and absolute value of rational numbers.				
MA.6.NS.C.7.a	Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.	1	2.3%	1	2.3%
MA.6.NS.C.7.b	Write, interpret, and explain statements of order for rational numbers in real-world contexts.	1	2.3%	1	2.3%
MA.6.NS.C.7.c	Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	1	2.3%	1	2.3%
MA.6.NS.C.7.d	Distinguish comparisons of absolute value from statements about order.	1	2.3%	1	2.3%

MA.6.NS.C.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	1	2.3%	1	2.3%
MA.6.EE.A	Apply and extend previous understandings of arithmetic to algebraic expressions.				
MA.6.EE.A.1	Write and evaluate numerical expressions involving whole-number exponents.	1	2.3%	1	2.3%
MA.6.EE.A.2	Write, read, and evaluate expressions in which letters stand for numbers.				
MA.6.EE.A.2.a	Write expressions that record operations with numbers and with letters standing for numbers.	1	2.3%	1	2.3%
MA.6.EE.A.2.c	Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	1	2.3%	1	2.3%
MA.6.EE.A.3	Apply the properties of operations to generate equivalent expressions.	1	2.3%	1	2.3%
MA.6.EE.A.4	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).	1	2.3%	1	2.3%
MA.6.EE.B	Reason about and solve one-variable equations and inequalities.				
MA.6.EE.B.5	Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	2	4.5%	2	4.5%
MA.6.EE.B.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	2	4.5%	2	4.5%
MA.6.EE.B.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	2	4.5%	2	4.5%
MA.6.EE.B.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	1	2.3%	1	2.3%

MA.6.EE.C	Represent and analyze quantitative relationships between dependent and independent variables.				
MA.6.EE.C.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	1	2.3%	1	2.3%
MA.7.RP.A	Analyze proportional relationships and use them to solve real-world and mathematical problems.				
MA.7.RP.A.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	1	2.3%	1	2.3%
MA.7.RP.A.2	Recognize and represent proportional relationships between quantities.				
MA.7.RP.A.2.a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	1	2.3%	1	2.3%
MA.7.RP.A.2.b	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.				
MA.7.RP.A.2.c	Represent proportional relationships by equations.	1	2.3%	1	2.3%
MA.7.RP.A.3	Use proportional relationships to solve multistep ratio and percent problems.	1	2.3%	1	2.3%
MA.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.				
MA.7.NS.A.2.c	Apply properties of operations as strategies to multiply and divide rational numbers.	1	2.3%	1	2.3%
MA.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.	2	4.5%	2	4.5%
MA.7.EE.A	Use properties of operations to generate equivalent expressions.				
MA.7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	1	2.3%	1	2.3%

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MA.7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.				
MA.7.EE.B.4.a	Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	1	2.3%	1	2.3%