

Grade 6 Advanced Math Proficiency Scale Quarter 1

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Signed Numbers	Identifies integers on a number line with structured support.	Understands integers by representing them on number line, ordering them or comparing two integers OR use and interpret integers in a real-world context.	Understands rational numbers by representing them on number line, ordering them and comparing two rational numbers AND use and interpret rational numbers in a real-world context. (6.NS.5, 6.NS.6a,c 6.NS.7)	Explains how to and finds the sum of any two rational numbers using a number line.
Coordinate Plane	Graphs coordinates on coordinate plane with structure support.	Graphs or uses coordinates and absolute value in the same quadrant to find the distances between points with the same first coordinate or the same second coordinate to solve mathematical problems.	Graphs and uses coordinates and absolute value in all four quadrants to find the distances between points with the same x-coordinates or y-coordinates to solve real-world and mathematical problems including polygons. (6.NS.6b, 6.NS.8, 6.G.3)	Not Assessed
Division	Divides numbers with a 2-digit dividend and 1-digit divisor with help and support.	Divides multi-digit numbers with a 3-digit dividend and 1-digit divisor using a single strategy.	Fluently divides multi-digit numbers with a 4-digit dividend and 2-digit divisor using the standard algorithm. (6.NS.2)	Compares and connects the different division strategies and describes in depth using math vocabulary.
Decimal Operations	Adds, subtracts, multiplies, or divides multi-digit decimals to the tenths with help and support.	Adds, subtracts, multiplies, or divides multi-digit decimals to the hundredths using a single strategy.	Fluently adds, subtracts, multiplies, and divides multi-digit decimals to the thousandths using the standard algorithm for each operation. (6.NS.3)	Solves multi-step real-world problems involving two or more operations of multi-digit decimals.
Division of Fractions	Participates in the practice, modeling the division of fractions.	Solves mathematical problems involving the division of a fraction by a fraction using a model or equation.	Solves real-world problems involving the division of fractions by fractions using a model and equation and interprets the quotient in the context of the problem. (6.NS.1)	Solves multi-steps real-world problems involving the division of fractions by fractions and interprets the quotient in the context of the problem.

Makes Sense of Problems and Persevere	Solves mathematical problems with structured support .	Engages in mathematical problems by working to understand the questions that is asked, trying different strategies or identifying why their solution make sense.	Actively engages in solving real-world and mathematical problems by working to understand the information that is in the problem and the questions that is asked, trying different strategies and identifying why their solution make sense. (MP.1)	Not Assessed
Attend to Precision	Attempts to communicate work and reasoning, but math vocabulary and units are absent AND calculates with repeated basic computation errors.	Attempts to communicate work and reasoning using math vocabulary and units AND calculates with basic computation errors.	Communicates work and reasoning using math vocabulary and units AND calculates with little or no basic computations error. (MP. 6)	Not Assessed

Grade 6 Math Proficiency Scale Quarter 2

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Ratios	Participates in the practice of representing ratios with structure support.	Uses ratio language to describe a ratio relationship between two quantities OR solves real-world problems involving equivalent ratios.	Uses ratio language to describe a ratio relationship between two quantities including part to part and part to whole ratios AND solves multi-step real-world problems involving equivalent ratios using multiple representations including the proportional relationship to justify reasoning. (6.RP.1, 6.RP.3a, 7.RP.3, 7.EE.2).	Using a representation, creates a scenario and additional models to explain ratio understanding.
Unit Rates & Conversions	Identifies a unit rate OR participates in the practice of using ratio reasoning to convert measurement units with structure support .	Understands the concept of a unit rate and solves unit rate mathematical problems OR uses ratio reasoning to convert measurement units.	Understands the concept of a unit rate and solves unit rate real-world and mathematical problems that involve ratios of fractions AND uses ratio reasoning to convert measurement units. (6.RP.2, 6.RP.3b & d, 7.RP.1)	Applies and explains reasoning in a multistep unit rate real world problem and gives a detailed explanation in the context of problem using mathematical vocabulary.
Percentages	Identifies a percent as a rate with structure support .	Writes a percent as a rate OR solves basic percent problems	Writes a percent of a quantity as a rate AND uses a proportional relationship to solve multistep percent problems AND rewrites expressions in different forms in a problem context to demonstrate how quantities are related. (6.RP.3c, 7.RP.3)	Uses proportional relationships to solve and explain in detailed using mathematical vocabulary multi-step unit rate percent problems.
Scaled Drawings	With guidance and support, recognizes the geometric figure to its scaled counterpart	Solves problems involving scale drawings of lengths.	Solves problems involving scale drawings of geometric figures including computing real lengths and areas from a scale drawing AND reproduce a scale drawing at a different scale. (7.G.1)	Not Assessed

Equations	Participates in the practice of solving one-step equations with help and support.	Uses substitution to determine whether a given number makes an equation true OR solves mathematical one-step equations when all variables are non-negative, integers.	Uses substitution to determine whether a given number makes an equation true (6.EE.5) AND writes and solves real-world and mathematical one-step equations when all variables are non-negative, rational numbers. (6.EE.6, 6.EE.7)	Solves real-world problems leading to two-step equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers.
Expressions	Reads or evaluates an expression involving numbers, using a single operation with help and support.	Writes, reads or evaluates expressions involving exponents, numbers, and variables using order of operations.	Writes, reads and evaluates expressions involving exponents, numbers, and variables using order of operations. (6.EE.1 & 2)	Not Assessed
Makes Sense of Problems and Persevere	Solves mathematical problems with structured support.	Engages in mathematical problems by working to understand the questions that is asked, trying different strategies or identifying why their solution make sense.	Actively engages in solving real-world and mathematical problems by working to understand the information that is in the problem and the questions that is asked, trying different strategies and identifying why their solution make sense. (MP.1)	Not Assessed
Attend to Precision	Attempts to communicates work and reasoning, but math vocabulary and units are absent AND calculates with repeated basic computation errors.	Attempts to communicates work and reasoning using math vocabulary and units AND calculates with basic computation errors.	Communicates work and reasoning using math vocabulary and units AND calculates with little or no basic computations error. (MP. 6)	Not Assessed

Grade 6 Math Proficiency Scale Quarter 3

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Equivalent Expressions	Applies a property of operations to generate equivalent expressions with help and support.	Applies the properties of operations to generate equivalent expressions OR identifies when two expressions are equivalent.	Applies the properties of operations to generate equivalent expressions AND identifies when two expressions are equivalent. (6.EE.3, 6.EE.4)	Apply properties of operations as strategies to add, subtract, factor and expand linear expressions with rational coefficients.
Inequalities	Identifies the graph of an inequality of the form $x > c$ or $x < c$ on a number line with structure support.	Writes or represent on a number line an inequality to represent a situation of a real-world or mathematical problem.	Writes and represent on a number line inequalities to represent a situation of a real-world or mathematical problem. (6.EE.8)	Solves real-world problems leading to equations of the form $px + q > r$ and $px + q < r$, where p , q , and r are specific rational numbers.
Proportional Relationships	With guidance and support, identifies graphs or equations that represent a proportional relationship with limited choices.	Identifies the unit rate or constant rate of proportionality from its table, equation OR graph.	Represents proportional relationships by equations AND explains what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate. (7.RP.2)	Explains in detail using mathematical vocabulary the relationship of a table of values, equation, real world situation and graph in a proportional relationship.
Area	Participates in the practice finding the area of a triangle, rhombus, parallelogram, kite or trapezoid by composing into rectangles or decomposing into triangles or other shapes.	Finds the area of a triangle, rhombus, parallelogram, kite or trapezoid by composing into rectangles or decomposing into triangles or other shapes.	Solves real-world problems involving area of polygons by composing into rectangles or decomposing into triangles or other shapes. (6.G.1)	Explains how to derive the formulas for a triangle, trapezoid AND parallelogram.
Nets & Surface Area	Identifies the nets of a right rectangular prism or right square pyramid with structured support.	Represents three-dimensional figures using nets made up of rectangles and triangles.	Identifies the nets of rectangular and triangular prisms and pyramids and explains how to find the surface area of right rectangular prisms or square pyramids. (6.G.4)	Solve real-world mathematical surface area problems involving composite figures consisting of right rectangular prisms and right square pyramids AND solve for unknown dimensions given the surface area and other dimensions.

Volume	Identifies the purpose of volume of right rectangular prism with structure support.	Describes the purpose of volume.	Explain how to find the volume of a right rectangular prism. (6.G.2)	Solve real-world mathematical volume problems involving composite figures consisting of right rectangular prisms AND solve for unknown dimensions given the volume and other dimensions.
Makes Sense of Problems and Persevere	Solves mathematical problems with structured support .	Engages in mathematical problems by working to understand the questions that is asked, trying different strategies or identifying why their solution make sense.	Actively engages in solving real-world and mathematical problems by working to understand the information that is in the problem and the questions that is asked, trying different strategies and identifying why their solution make sense. (MP.1)	Not Assessed
Attend to Precision	Attempts to communicates work and reasoning, but math vocabulary and units are absent AND calculates with repeated basic computation errors.	Attempts to communicates work and reasoning using math vocabulary and units AND calculates with basic computation errors.	Communicates work and reasoning using math vocabulary and units AND calculates with little or no basic computations error. (MP.6)	Not Assessed

Grade 6 Math Proficiency Scale Quarter 4

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Adding & Subtracting Rational Numbers	Engaged in the practice of adding and subtracting whole numbers.	Solves simple mathematical problems involving the addition and subtraction of integers .	Fluently adds and subtracts rational numbers using strategies. (7.NS.1)	Generalizes addition and subtraction of rational numbers by giving a detailed explanation in the context of problem using mathematical vocabulary
Multiplying and Dividing Rational Numbers	Engaged in the practice of multiplying and dividing integers AND/OR identifying rational numbers in one other form.	Identifies rational numbers in other forms (fractions, terminating decimals, and repeating decimals) AND/OR solves simple mathematical problems involving multiplication and division of integers .	Fluently multiplies and divides rational numbers and understands the definition of rational numbers. (7.NS.2)	Generalizes multiplying and dividing of rational numbers by giving a detailed explanation in the context of problem using mathematical vocabulary.
Real-world problems with Operations of Rational	With help and support, identifies the content useful for solving the problem.	Solves real world and mathematical problems involving the one operation with integers OR identifies the expression needed to solve the real-world problem.	Solves real world and mathematical problems involving operations of rational numbers AND interprets the solution of the problem. (7.NS.3)	Solves multi-step real world and mathematical problems involving the four operations of rational numbers and giving a detailed explanation in the context of problem using mathematical vocabulary.
Data Displays	Identifies the different numerical data displays with structured support .	Identifies overall shape of a data set that answers statistical questions OR displays numerical data in dot plots, histograms, or box plots	Understands overall shape of a data set that answers statistical questions AND displays numerical data in dot plots, histograms, and box plots (6.SP.1, 6.SP.2 6.SP.4)	

Data Calculations	Calculates a quantitative measures of center (median, mean, or mode) or variability (range, interquartile range, mean absolute deviation) with structure support.	Calculates quantitative measures of center (median, mean, and mode) or variability (range, interquartile range, mean absolute deviation) OR describe surface features and calculations in relation to the context of the data set or numerical display.	Understands and calculates quantitative measures of center (median, mean, and mode) and variability (range, interquartile range, mean absolute deviation) AND describe surface features and calculations in relation to the context of the data set or numerical display. (6.SP.3, 6.SP.5)	Draws multiple inferences about the measures of center and variability when comparing two different box plots or histograms.
Makes Sense of Problems and Persevere	Solves mathematical problems with structured support.	Engages in mathematical problems by working to understand the questions that is asked, trying different strategies or identifying why their solution make sense.	Actively engages in solving real-world and mathematical problems by working to understand the information that is in the problem and the questions that is asked, trying different strategies and identifying why their solution make sense. (MP.1)	Not Assessed
Attend to Precision	Attempts to communicates work and reasoning, but math vocabulary and units are absent AND calculates with repeated basic computation errors.	Attempts to communicates work and reasoning using math vocabulary and units AND calculates with basic computation errors.	Communicates work and reasoning using math vocabulary and units AND calculates with little or no basic computations error. (MP.6)	Not Assessed