Grade 7 Math Proficiency Scale Quarter 1

	1 = Novice	2 = Approaching	3 = Proficient	4 = Advanced
Adding & Subtracting Rational Numbers	Engaged in the practice of adding and subtracting whole numbers.	Represents addition and subtraction of integers on a model **OR** solves simple mathematical problems involving the addition and subtraction of integers.	Fluently adds and subtracts integers using strategies **AND** describes addition and subtraction integers using a model.	Fluently adds and subtracts **rational numbers** using strategies **AND** describes addition and subtraction **rational numbers** using a model. (7.NS.1)
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) **OR** solves simple mathematical problems involving multiplication and division of integers.	Fluently multiplies and divides integers and understands the definition of integers **AND** how multiplying integers satisfy the properties of operations.	Fluently multiplies and divides **rational numbers** and understands the definition **of rational numbers AND** how multiplying **rational numbers** satisfy the properties of operations. (7.NS.2)
Real-world problems with Operations of Rational Numbers	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 integers **AND** interprets the solution of the problem.	Solves real world and mathematical problems involving operations of **rational numbers AND** interprets the solution of the problem. (7.NS.3)
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.	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.	Not Assessed

Grade 7 Math Proficiency Scale Quarter 2

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Equivalent Expressions	Engages in the guided practice of identifying equivalent expressions.	Applies a property of operations to write an equivalent expressions with integer coefficients.	Applies properties of operations as strategies to add, subtract, factor and expand linear expressions with integers to write equivalent expressions.	Applies properties of operations as strategies to add, subtract, factor and expand linear expressions with **rational coefficients** to write equivalent expressions (7.EE.1)
Multi-Step Real-world Problems with Integers	Engages in the guided practice of writing numbers in another form (fractions, integers, decimals).	Solves one-step mathematical problems with integers in any form **OR** converts a number to another form (fractions, integers, decimals).	Solves multi-step real-world and mathematical problems posed with integers in any form **AND** assess the reasonableness of answers using mental computation and estimation strategies.	Solves multi-step real-world and mathematical problems posed with **rational numbers** in any form **AND** assess the reasonableness of answers using mental computation and estimation strategies. (7.EE.3)
Solving Equations	Engages in guided practice of solving equations.	Solves one-step equations in the form of $px = r$ and $x + p = r$ with integer coefficients.	Solves two-step equations including word problems in the form of $px + q = r$ and $p(x + q) = r$ where coefficients are integers and identifies the sequence of the operations used in each approach.	Solves two-step equations including word problems in the form of $px + q = r$ and $p(x + q) = r$ where coefficients are **rational numbers** and identifies the sequence of the operations used in each approach. (7.EE.4)
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.	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.	Not Assessed

Grade 7 Math Proficiency Scale Quarter 3

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Unit Rates	With guidance and support, identifies the constant of proportionality or unit rate.	**Identifies** the constant of proportionality or unit rate.	Computes unit rates associated with ratios of fractions. (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.
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.
Ratio and Percent Problems	Engages in the practice of writing a proportional relationship.	Uses a given proportional relationships to solve single-step ratio or percent problems.	Uses a proportional relationship to solve multistep ratio and percent problems (7.RP.3) **AND** rewrites expressions in different forms in a problem context to demonstrate how quantities are related. (7.EE.2)	Solves a multi-step ratio problem and gives a detailed explanation in the context of problem using mathematical vocabulary.
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** reproduces a scale drawing at a different scale. (7.G.1)	Not Assessed
Solving Inequalities	Engages in guided practice of graphing and writing inequalities.	Solves and graphs one-step inequalities $px > r$ and $px < r$.	Solves and graphs two-step inequalities and word problems in the form of $px + q > r$ and $px + q < r$. (7.EE.4)	Solves and graphs real world problems leading to inequalities with variables and rational coefficients on both sides **AND** gives a detailed explanation in the context of problem using mathematical vocabulary.

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.	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.	Not Assessed

Grade 7 Math Proficiency Scale Quarter 4

	1 – Novice	2 = Approaching	3 = Proficient	4 = Advanced
Angle Relationships, Constructions & Triangles	With help and support, can identify complementary, supplementary, vertical, or adjacent angles.	**Recognizes or recalls** the features of complementary, supplementary, vertical, and adjacent angles **OR** constructs geometric figures given conditions using tools.	Uses facts about supplementary, complementary, vertical, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure (7.G.5) **AND** recognizes that no triangle, a unique triangle or multiple triangles can be formed from a given set of conditions (7.G.2)	Uses facts about supplementary, complementary, vertical, and adjacent angles in a multistep problem to write and solve multi-step equations for an unknown angle in a figure and gives a detailed explanation in the context of problem using mathematical vocabulary.
Area and Surface Area	With help and support, matches the net to the prism or cylinder OR identifies the area formulas for a given two-dimensional shape.	Solves mathematical problems involving area or circumference of circles and/or area of polygons **OR** draws the net of a cylinder or prism.	Uses nets to solve real world and mathematical problems involving surface area of prisms and cylinders including composite solids (7.G.6) **AND** describes cross-sections of right rectangular prisms and pyramids. (7.G.3)	Solves for dimensions of the prism and cylinder given the surface area and other dimensions and explains their process with math vocabulary.
Volume of 3D Shapes	With help and support, recognizes right prisms.	Identifies the formulas OR information needed to calculate the volume of right prisms.	Solves real-world and mathematical problems involving volumes of right prisms including composite solids. (7.G.6)	Solves for dimensions of the right prism or cylinder given the volume and other dimensions and gives a detailed explanation in the context of problem using mathematical vocabulary.
Data Collections and Calculations	Engages in the practice of generating random samples.	Generates a random sample and makes predictions based on the sample.	Analyzes and draws inferences about a population using single and multiple random samples by using measures of center and variability for the numerical data set. (7.SP.1-4)	Draws multiple inferences when comparing two populations using mathematical vocabulary and gives a detailed explanation in the context of problem using mathematical vocabulary.

Probability	Engages in the practice of collecting data on a chance process.	Collects data on a chance process and makes predictions based on probability models.	Develop a probability model to find probabilities of theoretical events and compares/contrasts probabilities from an experimental model **AND** finds probabilities of compound events using organized lists, tables, tree diagrams, and simulations (7.SP.5-8)	Finds probability of multiple independent and dependent events and gives a detailed explanation in the context of problem using mathematical vocabulary.
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 Numbers	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.
Solving Equations	Engages in guided practice of solving equations.	Solves one-step equations in the form of $px = r$ and $x + p = r$ **OR** solves equations with integer coefficients.	Solves two-step equations including word problems in the form of $px + q = r$ and $p(x + q) = r$ where coefficients are rational numbers and identifies the sequence of the operations used in each approach. (7.EE.4)	Solves equations with variables on both sides where coefficients are rational **AND** gives a detailed explanation in the context of problem using mathematical vocabulary.

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.	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.	Not Assessed