

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Ratios & Proportional Relationships) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations Level 4 – A student who performs at Level 4 exceeds expectations for the assessed standards.	Meets Expectations Level 3 – A student who performs at Level 3 meets expectations for the assessed standards.	Partially Meets Expectations Level 2 – A student who performs at Level 2 partially meets expectations for the assessed standards.	Does Not Yet Meet Expectations Level 1 – A student who performs at Level 1 does not yet meet expectations for the assessed standards.
Analyze proportional relationships and use them to solve real-world and mathematical problems: 7.RP.A.1, 7.RP.A.2.a, 7.RP.A.2.b, 7.RP.A.2.c, 7.RP.A.2.d, 7.RP.A.3			
Accurately and consistently analyzes and uses proportional relationships to solve real-world and mathematical problems, including multi-step ratio/percent problems.	Correctly analyzes and uses proportional relationships to solve real-world and mathematical problems, including simple ratio/percent problems.	Partially uses proportional relationships to solve real-world and mathematical problems, including simple ratio/percent problems.	Identifies proportional relationships to solve mathematical problems, including ratio/percent problems.
Accurately and consistently computes unit rates of quantities associated with ratios of fractions.	Correctly computes unit rates of quantities associated with ratios of fractions.	Partially computes unit rates of quantities associated with ratios of fractions, with partial accuracy.	Identifies whether two quantities are in a proportional relationship.
Accurately and consistently decides whether two quantities are in a proportional relationship and identifies the constant of proportionality (unit rate) in tables, equations, diagrams, verbal descriptions and graphs.	Correctly decides whether two quantities are in a proportional relationship and identifies the constant of proportionality (unit rate) in tables, equations, diagrams, verbal descriptions and graphs.	Partially decides whether two quantities are in a proportional relationship and identifies the constant of proportionality (unit rate) in tables, equations, diagrams, verbal descriptions and graphs, with partial accuracy.	
Accurately and consistently interprets a point (x, y) on the graph of a proportional relationship in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	Correctly interprets a point (x, y) on the graph of a proportional relationship in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	Partially interprets a point (x, y) on the graph of a proportional relationship in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	Attempts to interpret a point (x, y) on the graph of a proportional relationship in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
Accurately and consistently represents proportional relationships by equations and uses them to solve mathematical and real-world problems, including multi-step ratio and percent problems.	Correctly represents proportional relationships by equations and uses them to solve mathematical and real-world problems, including simple ratio and percent problems.	Partially uses equations representing a proportional relationship to solve mathematical and real-world problems, including ratio and percent problems.	Attempts to use equations representing a proportional relationship to solve mathematical and real-world problems, including ratio and percent problems.
Accurately and consistently determines when it is appropriate to use a unit rate and understands its limitations.	Correctly determines when it is appropriate to use a unit rate.	Determines when it is appropriate to use a unit rate, with partial accuracy.	Determines when it is appropriate to use a unit rate, with limited accuracy.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (The Number System) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Apply and extend previous understandings of operations with fractions: 7.NS.A.1.a, 7.NS.A.1.b, 7.NS.A.1.c, 7.NS.A.1.d, 7.NS.A.2.a, 7.NS.A.2.b, 7.NS.A.3			
Performs operations on positive and negative rational numbers in multi-step mathematical and real-world problems, with consistent accuracy.	Performs operations on positive and negative rational numbers in multi-step mathematical and real-world problems, with accuracy.	Performs operations on positive and negative rational numbers in mathematical and real-world problems, with partial accuracy.	Performs operations on positive and negative rational numbers in mathematical problems, with limited accuracy.
Represents addition and subtraction on a horizontal or vertical number line and recognizes situations in which opposite quantities combine to make zero, with consistent accuracy.	Represents addition and subtraction on a horizontal or vertical number line and recognizes situations in which opposite quantities combine to make zero, with accuracy.	Represents addition and subtraction on a horizontal or vertical number line and recognizes situations in which opposite quantities combine to make zero, with partial accuracy.	Represents addition and subtraction on a horizontal or vertical number line, with limited accuracy.
Using the properties of operations, justifies the steps taken to solve multi-step mathematical and real-world problems involving rational numbers.			
Accurately and consistently solves real-world and mathematical problems involving the four operations with rational numbers.	Correctly solves real-world and mathematical problems involving the four operations with rational numbers (e.g., fractions, integers, decimals).	Partially solves real-world and mathematical problems involving the four operations with rational numbers.	Attempts to solve real-world and mathematical problems involving the four operations with rational numbers.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Expressions & Equations) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Use properties of operations to generate equivalent expressions: 7.EE.A.1, 7.EE.A.2			
Accurately and consistently applies properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Correctly applies properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Partially applies properties of operations as strategies to add, subtract and expand linear expressions.	Minimally applies properties of operations as strategies to add and subtract linear expressions.
Accurately and consistently rewrites an expression using different representations (<i>e.g.</i> , vertex form, standard form, etc.), and interprets and understands the relationships between the different representations.	Rewrites an expression using different representations.	Partially rewrites an expression using different representations.	Minimally rewrites an expression using different representations.
Solve real-life and mathematical problems using numerical and algebraic strategies: 7.EE.A.3, 7.EE.B.4.a, 7.EE.B.4.b			
Accurately and consistently determines reasonableness of a solution and interprets solutions in real-world contexts.	Determines reasonableness of a solution.	Partially determines reasonableness of a solution, with partial accuracy.	Attempts to determine reasonableness of a solution, with limited accuracy.
In mathematical or real-world contexts, accurately and consistently uses variables to represent quantities, construct and solve equations and inequalities, and graph and interpret solution sets.	In a mathematical or real-world context, correctly uses variables to represent quantities, construct and solve equations and inequalities, and graph solution sets.	In a mathematical context, partially uses variables to represent quantities, construct and solve equations and inequalities, and graph solution sets.	In a mathematical context, attempts to use variables to represent quantities, construct and solve equations and inequalities, and graph solution sets.
Describes the relationship between equivalent quantities that are expressed algebraically in different forms in a problem context and explains their equivalence in light of the context of the problem.			
Accurately and consistently solves multi-step linear equations with rational coefficients.	Correctly solves two-step linear equations with rational coefficients.	Partially solves two-step linear equations with rational coefficients.	Attempts to solve one-step linear equations with rational coefficients.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Geometry) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Draw, construct, and describe geometrical figures and describe the relationships between them: 7.G.A.1, 7.G.A.2, 7.G.A.3			
Accurately and consistently solves problems involving scale drawings of geometric figures, including reproducing a scale drawing at a different scale.	Correctly solves problems involving scale drawings of geometric figures, including reproducing a scale drawing at a different scale.	Partially solves problems involving scale drawings of geometric figures.	Attempts to solve problems involving scale drawings of geometric figures.
Accurately and consistently draws geometric figures – freehand, with a ruler and protractor or with technology – and describes their attributes.	Correctly draws geometric figures – freehand, with a ruler and protractor or with technology – and describes their attributes.	Partially draws geometric figures – freehand, with a ruler and protractor, or with technology – and describes some of their attributes.	Attempts to draw geometric figures – freehand, with a ruler and protractor, or with technology – and describes some of their attributes.
Accurately and consistently constructs triangles with given angle and side conditions and notices when those conditions determine a unique triangle, more than one triangle or no triangle.	Correctly constructs triangles with given angle and side conditions.	Partially constructs triangles with given angle and side conditions.	
Accurately and consistently describes two-dimensional figures that result from slicing three-dimensional figures by a plane which may or may not be parallel or perpendicular to a base or face.	Correctly describes the two-dimensional figures that result from slicing three-dimensional figures by a plane parallel or perpendicular to a base or face.	Partially describes the two-dimensional figures that result from slicing three-dimensional figures by a plane parallel or perpendicular to a base or face.	

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Geometry) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Solve real-life and mathematical problems involving angle measure area, surface area, and volume: 7.G.B.4, 7.G.B.5, 7.G.B.6			
Accurately and consistently solves mathematical and real-world problems involving circumference, area, surface area, and volume of two- and three-dimensional objects, including composite objects.	Correctly solves mathematical and real-world problems involving circumference, area, surface area, and volume of two- and three-dimensional objects.	Partially solves mathematical problems involving circumference, area, surface area, and volume of two- and three-dimensional objects.	Attempts to solve mathematical problems involving circumference and area of two-dimensional objects.
Accurately and consistently represents angle relationships using equations to solve for unknown angles.	Correctly represents angle relationships using equations to solve for unknown angles.	Uses facts about angle relationships to partially determine the measure of unknown angles.	Attempts to use facts about angle relationships to determine the measure of unknown angles with minimal accuracy.
Produces a logical conclusion about the relationship between the circumference and area of a circle.	Produces an informal conclusion about the relationship between the circumference and area of a circle.		

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Statistics & Probability) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Use random sampling to draw inferences about a population: 7.SP.A.1, 7.SP.A.2			
Accurately and consistently generates multiple samples of the same size to gauge the variation in estimates or predictions.	Correctly generates multiple samples of the same size to gauge the variation in estimates or predictions.	Partially generates multiple samples of the same size to gauge the variation in estimates or predictions.	Attempts to generate multiple samples of the same size to gauge the variation in estimates or predictions.
Accurately and consistently analyzes and justifies whether a sample is representative of a population.	Correctly understands whether a sample is representative of a population.	Partially understands whether a sample is representative of a population.	Attempts to understand whether a sample is representative of a population.
Draw informal comparative inferences about two populations: 7.SP.B.3, 7.SP.B.4			
Demonstrates and uses random sampling to draw inferences about a population, with consistent accuracy.	Understands and uses random sampling to draw inferences about a population, with accuracy.	Draws partial inferences about a population from a table or graph of random samples.	Compares two populations based on measures of center and measures of variability.
Draws relevant informal comparative inferences about two populations with justification, including assessing the degree of visual overlap of two numerical data distributions with similar variabilities, with consistent accuracy.	Draws relevant informal comparative inferences about two populations, with accuracy.	Draws partial, informal comparative inferences about two populations, with partial accuracy.	

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Content (Statistics & Probability) The student solves problems for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Investigate chance processes and develop, use, and evaluate probability models: 7.SP.C.5, 7.SP.C.6, 7.SP.C.7.a, 7.SP.C.7.b, 7.SP.C.8.a, 7.SP.C.8.b, 7.SP.C.8.c			
Accurately and consistently demonstrates that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.	Understands that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring, with probabilities close to 1 indicating likely events and probabilities close to 0 indicating unlikely events.	Partially understands that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.	Minimally understands that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.
Generates a sample space to determine the probability of simple or compound events using methods such as organized lists, tables, tree diagrams or simulations with accuracy and consistency.	Finds probabilities when given sample spaces for simple and compound events using methods such as organized lists, tables and tree diagrams with accuracy.	Finds probabilities when given sample spaces for simple events using methods such as organized lists and tables with partial accuracy.	Attempts to find probabilities when given sample spaces for simple events, with limited accuracy.
Understands and explains how to use data to approximate the probability of a chance event.	Understands how to use data to approximate the probability of a chance event.	Partially demonstrates understanding of how to use data to approximate the probability of a chance event.	Demonstrates limited understanding of how to use data to approximate the probability of a chance event.
Accurately and consistently develops a model to approximate the probability of a chance event and predicts approximate frequencies when given the probability or by observing frequencies in data generated from the process.	Correctly develops a model to approximate the probability of a chance event and predicts approximate frequencies when given the probability or by observing frequencies in provided data.	Partially develops a model to approximate the probability of a chance event and predicts approximate frequencies when given the probability.	Attempts to develop a model to approximate the probability of a chance event and predicts approximate frequencies when given the probability.
Develops probability models to determine the probabilities of events.			
Understands and explains how simulations can be used to generate frequencies for compound events.	Understands how simulations can be used to generate frequencies of an event.	Partially demonstrates understanding of how simulations can be used to generate frequencies of an event.	Demonstrates limited understanding of how simulations can be used to generate frequencies of an event.
Understands and explains how to use simulations to estimate the probability of a compound event.	Understands how simulations can be used to estimate the probability of an event.		

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Reasoning (may cross multiple reporting categories) In connection with content, the student expresses grade/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Properties of Operations: 7.NS.A.1.a, 7.NS.A.1.b, 7.NS.A.1.c, 7.NS.A.1.d, 7.NS.A.2.a, 7.NS.A.2.b, 7.NS.A.2.c, 7.NS.A.2.d, 7.EE.A.1			
In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response based on the properties of operations and the relationship between addition and subtraction or between multiplication and division, including: - a logical approach based on a conjecture and/or stated assumptions - a logical and complete progression of steps - precision of calculation - correct use of grade-level vocabulary, symbols and labels - complete justification of a conclusion - evaluating, interpreting, and critiquing the validity of others' responses, approaches, conclusions, and reasoning, and correcting and providing counter-examples where applicable - generalization of an argument or conclusion.	In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response based on the properties of operations and the relationship between addition and subtraction or between multiplication and division, including: - a logical approach based on a conjecture and/or stated assumptions - a logical and complete progression of steps - precision of calculation - correct use of grade-level vocabulary, symbols and labels - complete justification of a conclusion - evaluating, interpreting and critiquing the validity of others' responses, approaches, conclusions, and reasoning.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates a complete response based on the properties of operations and the relationship between addition and subtraction or between multiplication and division, including: - a logical approach based on a conjecture and/or stated assumptions - a logical, but incomplete, progression of steps - minor calculation errors - some use of grade-level vocabulary, symbols and labels - partial justification of a conclusion - evaluating the validity of others' approaches and conclusions.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates an incomplete response based on the properties of operations and the relationship between addition and subtraction or between multiplication and division, including: - a faulty approach based on a conjecture and/or stated assumptions - an incomplete or illogical progression of steps - major calculation errors - limited use of grade-level vocabulary, symbols and labels - partial justification of a conclusion.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Reasoning (may cross multiple reporting categories) In connection with content, the student expresses grade/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.			
Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Concrete Referents and Diagrams: 7.NS.A.1.a, 7.NS.A.1.b, 7.NS.A.1.c, 7.NS.A.1.d, 7.RP.A.1, 7.RP.A.2.a, 7.RP.A.2.b, 7.RP.A.2.c, 7.RP.A.2.d, 7.RP.A.3			
In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response based on concrete referents provided in the prompt or constructed by the student such as: diagrams that are connected to a written (symbolic) method, number line diagrams or coordinate plane diagrams, including: • a logical approach based on a conjecture and/or stated assumptions • a logical and complete progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • complete justification of a conclusion • evaluating, interpreting and critiquing the validity and efficiency of others' responses, approaches, conclusions, and reasoning, and providing a counter-example where applicable • generalization of an argument or conclusion.	In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response based on concrete referents provided in the prompt or constructed by the student such as: diagrams that are connected to a written (symbolic) method, number line diagrams or coordinate plane diagrams, including: • a logical approach based on a conjecture and/or stated assumptions • a logical and complete progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • complete justification of a conclusion • evaluating, interpreting and critiquing the validity of others' responses, approaches, conclusions, and reasoning.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates an incomplete response based on concrete referents provided in the prompt or in simple cases, constructed by the student such as: diagrams that are connected to a written (symbolic) method, number line diagrams or coordinate plane diagrams, including: • a logical approach based on a conjecture and/or stated assumptions • a logical, but incomplete, progression of steps • minor calculation errors • some use of grade-level vocabulary, symbols and labels • partial justification of a conclusion • evaluating the validity of others' approaches and conclusions.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates an incomplete response based on concrete referents provided in the prompt such as: diagrams, number line diagrams or coordinate plane diagrams, which may include: • a faulty approach based on a conjecture and/or stated assumptions • an illogical and incomplete progression of steps • major calculation errors • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Reasoning (may cross multiple reporting categories) In connection with content, the student expresses grade/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.			
Distinguish Correct Explanation / Reasoning from that which is Flawed: 7.EE.B.3, 7.EE.B.4.a, 7.RP.A.2.a, 7.RP.A.2.b, 7.RP.A.2.c, 7.RP.A.2.d, 7.RP.A.3, 7.NS.A.2.d, 7.NS.A.3			
In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response to a given equation, multi-step problem, proposition or conjecture, including: • a logical approach based on a conjecture and/or stated assumptions • a logical and complete progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • complete justification of a conclusion • evaluating, interpreting and critiquing the validity and efficiency of others' responses, approaches, conclusions, and reasoning, and provides a counter-example where applicable • generalization of an argument or conclusion • identifying and describing errors in solutions and presenting correct solutions • distinguishing correct explanation / reasoning from that which is flawed. If there is a flaw, presents correct reasoning.	In connection with the content knowledge, skills, and abilities, the student clearly constructs and communicates a well organized and complete response to a given equation, multi-step problem, proposition or conjecture, including: • a logical approach based on a conjecture and/or stated assumptions • a logical and complete progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • complete justification of a conclusion • evaluating, interpreting and critiquing the validity of others' responses, approaches, conclusions, and reasoning • identifying and describing errors in solutions and presenting correct solutions.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates a complete response to a given equation, multi-step problem, proposition or conjecture, including: • a logical approach based on a conjecture and/or stated assumptions • a logical, but incomplete, progression of steps • minor calculation errors • some use of grade-level vocabulary, symbols and labels • partial justification of a conclusion • evaluating the validity of others' approaches and conclusions • identifying and describing errors in solutions.	In connection with the content knowledge, skills, and abilities, the student constructs and communicates an incomplete response to a given equation, multi-step problem, proposition or conjecture, including: • a faulty approach based on a conjecture and/or stated assumptions • an illogical and incomplete progression of steps • major calculation errors • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion.

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Modeling (may cross multiple reporting categories)

In connection with content, the student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course, engaging particularly in the Modeling practice, and where helpful making sense of problems and persevering to solve them, reasoning abstractly and quantitatively, using appropriate tools strategically, looking for and making use of structure, and/or looking for and expressing regularity in repeated reasoning.

Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
Modeling: 7.EE.A.1, 7.EE.A.2, 7.EE.A.3, 7.EE.A.4.a, 7.EE.A.4.b, 7.NS.A.1.a, 7.NS.A.1.b, 7.NS.A.1.c, 7.NS.A.1.d, 7.NS.A.2.a, 7.NS.A.2.b, 7.NS.A.2.c, 7.NS.A.3, 7.RP.A.1, 7.RP.A.2.a, 7.RP.A.2.b, 7.RP.A.2.c, 7.RP.A.2.d, 7.RP.A.3			
In connection with the content knowledge, skills, and abilities, the student devises a well organized plan to apply mathematics in solving problems arising in everyday life, society, and the workplace by: • using stated assumptions and making assumptions and approximations to simplify a real-world situation • analyzing and/or creating constraints, relationships, and goals • mapping relationships between important quantities by selecting appropriate tools to create models • analyzing relationships mathematically between important quantities to draw conclusions • analyzing, justifying and defending models which lead to a conclusion • reflecting on whether the results make sense • improving the model if it has not served its purpose • applying proportional reasoning	In connection with the content knowledge, skills, and abilities, the student devises a well organized plan to apply mathematics in solving problems arising in everyday life, society, and the workplace by: • using stated assumptions and making assumptions and approximations to simplify a real-world situation • mapping relationships between important quantities by selecting appropriate tools to create models • analyzing relationships mathematically between important quantities to draw conclusions • writing a complete, clear and correct algebraic expression or equation to describe a situation • reflecting on whether the results make sense • improving the model if it has not served its purpose • applying proportional reasoning	In connection with the content knowledge, skills, and abilities, the student devises a plan to apply mathematics in solving problems arising in everyday life, society, and the workplace by: • using stated assumptions and approximations to simplify a real-world situation • illustrating relationships between important quantities by using provided tools to create models • analyzing relationships mathematically between important quantities to draw conclusions • writing an incomplete algebraic expression or equation to describe a situation • reflecting on whether the results make sense • modifying the model if it has not served its purpose • applying proportional reasoning	In connection with the content knowledge, skills, and abilities, the student devises a plan to apply mathematics in solving problems arising in everyday life, society, and the workplace by: • using stated assumptions and approximations to simplify a real-world situation • identifying important quantities using provided tools to create models • analyzing relationships mathematically to draw conclusions • writing an incomplete algebraic expression or equation to describe a situation • applying proportional reasoning

GRADE 7 MATHEMATICS

Performance Level Descriptors

Grade 7 Math: Modeling (may cross multiple reporting categories)

In connection with content, the student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course, engaging particularly in the Modeling practice, and where helpful making sense of problems and persevering to solve them, reasoning abstractly and quantitatively, using appropriate tools strategically, looking for and making use of structure, and/or looking for and expressing regularity in repeated reasoning.

Exceeds Expectations	Meets Expectations	Partially Meets Expectations	Does Not Yet Meet Expectations
• writing a complete, clear and correct algebraic expression or equation to describe a situation • writing/using functions to describe how one quantity of interest depends on another • using reasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity • interpreting mathematical results in the context of the situation.	• writing/using functions to describe how one quantity of interest depends on another • using reasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity • interpreting mathematical results in the context of the situation.	• writing/using functions to describe how one quantity of interest depends on another • using reasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity • interpreting mathematical results in a simplified context.	• using functions to describe how one quantity of interest depends on another • using unreasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity.