Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Addition and Subtraction Operations with Decimals: 5.NBT.7–1, 5.NBT.7–2			
Adds or subtracts two decimals to hundredths using concrete models, drawings or strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Adds or subtracts two decimals to hundredths using concrete models, drawings or strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Adds or subtracts (without regrouping) two decimals to hundredths using concrete models, drawings or strategies based on place value and/or the relationship between addition and subtraction.	Adds or subtracts (without regrouping) two decimals to hundredths (both decimals presented with the same number of decimal places) using concrete models, drawings or strategies based on place value and/or the relationship between addition and subtraction.
Applies this concept to a real-world context, and relates the strategy to a written method and explain the reasoning used.			
Adding and Subtracting in Context with Fractions: 5.NF.2–1, 5.NF.2–2, 5.NF.A.Int.1			
Describes a model to represent word problems involving addition and subtraction of fractions and mixed numbers referring to the same whole in cases of unlike denominators by using visual fraction models or equations.	Solves word problems involving addition and subtraction of fractions and mixed numbers referring to the same whole in cases of unlike denominators by using visual fraction models or equations.	Solves word problems involving addition and subtraction of fractions and mixed numbers using only denominators of 2, 4, 5 or 10 or benchmark fractions with unlike denominators, referring to the same whole by using visual fraction models or equations.	Solves word problems involving addition and subtraction of fractions using only denominators of 2, 4, 5 or 10.
Assesses and justifies reasonableness using benchmark fractions and number sense of fractions.			

Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Fractions with Unlike Denominators: 5.NF.1–1, 5.NF.1–2, 5.NF.1–3, 5.NF.1–4, 5.NF.1–5			
Adds and subtracts three or more fractions and adds and subtracts two mixed numbers with unlike denominators in such a way as to produce an equivalent sum or difference with like denominators.	Adds and subtracts two fractions or mixed numbers with unlike denominators in such a way as to produce an equivalent sum or difference with like denominators.	Adds or subtracts two fractions or mixed numbers with unlike denominators using only fractions with denominators of 2, 4, 5 or 10 in such a way as to produce an equivalent sum or difference with like denominators.* *below grade level.	Adds or subtracts two fractions with unlike denominators using only fractions with denominators of 2, 4, 5 or 10 in such a way as to produce an equivalent sum or difference with like denominators.* *below grade level.
Multiplication and Division Operations with Decimals: 5.NBT.7-3, 5.NBT.7-4, 5.NBT.Int.1			
Multiplies tenths by tenths or tenths by hundredths and divides in problems involving tenths and/or hundredths using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Multiplies tenths by tenths or tenths by hundredths and divides in problems involving tenths and/or hundredths using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Multiplies tenths by tenths and divides in problems involving tenths using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Multiplies tenths by tenths in problems involving tenths using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.
Performs exact and approximate multiplications and divisions by mentally applying place value strategies when appropriate.			
Relates the strategy to a written method.	Relates the strategy to a written method.		
Multiply with Whole Numbers: 5.NBT.5, 5.Int.1, 5.Int.2			
Solves two-step unscaffolded word problems involving multiplication and multiplies four-digit by two-digit	Solves two-step scaffolded word problems involving multiplication of a	Solves one-step word problems involving multiplication of a three-digit by a one-digit whole number.	Solves one-step word problems involving multiplication.

Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
whole numbers using the standard algorithm.	three-digit by a one-digit whole number.		
Performs exact and approximate multiplications and divisions by mentally applying place value strategies when appropriate.			
Accurately multiplies multi-digit whole numbers using the standard algorithm and assesses reasonableness of the product.	Accurately multiplies multi-digit whole numbers using the standard algorithm.	Multiplies multi-digit whole numbers using the standard algorithm with limited accuracy.	
Quotients and Dividends: 5.NBT.6			
Divides whole numbers up to four-digit dividends and two- digit divisors using strategies based on place value, the properties of operations and/or the relationship between multiplication and division.	Divides whole numbers up to four-digit dividends and one-digit divisors which are multiples of ten using strategies based on place value, the properties of operations and/or the relationship between multiplication and division.	Divides whole numbers up to three-digit dividends and one- digit divisors which are multiples of ten using strategies based on place value, the properties of operations and/or the relationship between multiplication and division.	Correctly identifies the quotient of whole numbers up to three- digit dividends and one-digit divisors which are multiples of ten.
Illustrates and explains the calculations by using equations, rectangular arrays, and area models.			
Checks reasonableness of answers by using multiplication or estimation.			
Multiplying and Dividing with Fractions: 5.NF.4a–1, 5.NF.4a–2, 5.NF.4b–1, 5.NF.6–1, 5.NF.6–2, 5.NF.7a, 5.NF.7b, 5.NF.7c			
Describes a model to represent and/or solve real-world problems, by multiplying a mixed number by a fraction, a fraction by a fraction and	Multiplies a fraction or a whole number by a fraction and divides a fraction by a whole number –or whole number by a fraction – using	Multiplies a fraction or a whole number by a fraction and divide a fraction by a whole number or whole	Multiplies a fraction or a whole number by a fraction using visual fraction models.

Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
a whole number by a fraction; dividing a fraction by a whole number and a whole number by a fraction using visual fraction models and creating context for the mathematics and equations, including rectangular areas; and interpreting the product and/or quotient.	visual fraction models and creating context for the mathematics, including rectangular areas.	number by a fraction using visual fraction models.	
Interpreting Fractions: 5.NF.3–1, 5.NF.3–2			
Solves word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.	Solves word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.	Solves word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers by using manipulatives or visual models to identify between which two whole numbers the answer lies.	Solves word problems involving division of whole numbers leading to answers in the form of fractions by using manipulatives or visual models to identify between which two whole numbers the answer lies.
Interprets the fraction as division of the numerator by the denominator.	Interprets the fraction as division of the numerator by the denominator.		
Identifies a simple model representing the situation.			
Describes a model to represent the situation.			
Recognizing Volume: 5.MD.3, 5.MD.4			
Recognizes volume as an attribute of solid figures and understands volume is measured using cubic units and can be found by packing a solid	Recognizes volume as an attribute of solid figures and understands volume is measured using cubic units and can be found by packing a solid	Recognizes volume as an attribute of solid figures and with a visual model understands that volume is measured using cubic units and can	Recognizes volume as an attribute of solid figures.

Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
figure with unit cubes and counting them.	figure with unit cubes and counting them.	be found by packing a solid figure with unit cubes and counting them.	
Represents the volume of a solid figure as "n" cubic units.			
Writes an equation that illustrates the unit cube pattern.			
Finding Volume: 5.MD.5b, 5.MD.5c			
Solves real-world and mathematical problems by applying the formulas for volume, relating volume to the operations of multiplication and addition, and recognizing volume is additive by finding the volume of solid figures of two or more non-overlapping parts.	Given a visual model, solves real-world and mathematical problems by applying the formulas for volume, relating volume to the operations of multiplication and addition, and recognizing volume is additive by finding the volume of solid figures of two non-overlapping parts.	Given a visual model and the formulas for finding volume, solves real-world and mathematical problems by applying the formulas for volume ($V = l \times w \times h$ and $V = B \times h$).	Given a visual model, solves volume problems by counting unit cubes.
Read, Write and Compare Decimals: 5.NBT.3a, 5.NBT.3b, 5.NBT.4			
Reads, writes and compares decimals to any place using numerals, number names, expanded form and symbols (>, <, =); rounds to any place and chooses appropriate context given a rounded number.	Reads, writes and compares decimals to the hundredths using numerals, number names, expanded form and symbols (>, <, =), and rounds to any place.	Reads, writes and compares decimals to the hundredths using numerals, number names, expanded form and symbols (>, <, =), and rounds to any place with scaffolding.	Identifies the correct comparison of decimals to the hundredths using numerals, number names, expanded form and symbols (>, <, =).
Place Value: 5.NBT.1, 5.NBT.2-2, 5.NBT.A.Int.1			
In any multi-digit number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the	In any multi-digit number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right or 1/10 of what it represents in the place to its left	In any multi-digit number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right or 1/10 of what it represents in the	In any multi-digit number, recognizes a digit in one place represents 10 times as much as it represents in the

Grade 5 Math: Content (Sub-Claim A) The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
place to its left and uses whole number exponents to denote powers of 10 and uses symbols to compare two powers of 10 expressed exponentially (compare 10^2 to 10^5).	and uses whole number exponents to denote powers of 10.	place to its left by using manipulatives or visual models.	place to its right by using manipulatives or visual models.
Multiplication Scaling: 5.NF.5a			
Interprets multiplication scaling by comparing the size of the product to the size of one factor on the basis of the size of the second factor without performing the indicated multiplication, focusing on one factor being a fraction greater than or less than one.	Interprets multiplication scaling by comparing the size of a product to the size of one factor on the basis of the size of the second factor without performing the indicated multiplication where one factor is a fraction less than one.	Interprets multiplication scaling by comparing the size of a product to the size of one factor on the basis of the size of the second factor by performing the indicated multiplication where one factor is a fraction less than one using manipulatives or visual models.	Identifies multiplication scaling by comparing the size of a product to the size of one factor on the basis of the size of the second factor by performing the indicated multiplication where one factor is a fraction less than one using manipulatives or visual models.

Grade 5 Math: Content (Sub-Claim B) The student solves problems involving the Additional and Supporting Content for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Write and Interpret Numerical Expressions: 5.OA.1, 5.OA.2–1, 5.OA.2–2			
Uses parentheses, brackets, or braces with no greater depth than two, to write and evaluate numerical expressions.	Uses parentheses, brackets, or braces to write numerical expressions.	Uses parentheses, brackets, or braces to write simple numerical expressions.	Uses parentheses to write simple numerical expressions.
Interprets numerical expressions without evaluating them.	Interprets simple numerical expressions without evaluating them.		
Graphing on the Coordinate Plane: 5.G.1, 5.G.2, 5.OA.3			
Represents real-world and mathematical problems by locating and graphing points in the first quadrant of a coordinate plane and interprets coordinate values of points in the context of the situation.	Represents real-world and mathematical problems by locating and graphing points in the first quadrant of a coordinate plane.	Represents real-world and mathematical problems by locating or graphing points in the first quadrant of a coordinate plane.	Represents real-world mathematical problems by locating points in the first quadrant of a coordinate plane.
Two-Dimensional Figures: 5.G.3, 5.G.4			
Classifies two-dimensional figures in a hierarchy based on properties.	Classifies two-dimensional figures in a hierarchy based on properties.	Classifies two-dimensional figures based on properties.	Identifies two-dimensional figures based on properties.
Understands that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	Understands that shared attributes categorize two- dimensional figures.	Understands that shared attributes categorize two- dimensional figures.	
Uses appropriate tools to determine similarities and differences between categories and subcategories.			

Grade 5 Math: Content (Sub-Claim B) The student solves problems involving the Additional and Supporting Content for the grade/course with connections to the Standards for Mathematical Practice.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Conversions: 5.MD.1–1, 5.MD.1–2			
Converts among different-sized standard measurement units within a given measurement system and uses these conversions to solve real-world, multi-step problems.	Converts among different-sized standard measurement units within a given measurement system and uses these conversions to solve real-world, single-step problems.	Converts among different-sized standard measurement units within a given measurement system and solves single-step problems by using manipulatives or visual models.	Identifies the correct conversion among different-sized standard units within a given measurement system.
Chooses the appropriate measurement unit based on the given context.			
Data Displays: 5.MD.2-2			
Uses operations on fractions with denominators of 2, 4, and 8 to solve problems involving information in line plots and interprets the solution in relation to the data.	Uses operations on fractions with denominators of 2 and 4 to solve problems involving information in line plots.	Uses operations on fractions with like denominators of 2 and 4 to solve problems involving information in line plots.	Uses operations on fractions with like denominators of 2 to solve problems involving information in line plots.

Grade 5 Math: Reasoning (Sub-Claim C) 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**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Properties of Operations: 5.C.1-1, 5.C.1-2, 5.C.1-3, 5.C.2-1, 5.C.2-2, 5.C.2-3, 5.C.2-4			
In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a well- organized and complete written response based on explanations/reasoning using the: • properties of operations • relationship between addition and subtraction • relationship between multiplication and division Response may include: • a logical/defensible approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • an efficient and logical progression of steps with appropriate justification • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a well-organized and complete written response based on explanations/ reasoning using the: • properties of operations • relationship between addition and subtraction • relationship between multiplication and division Response may include: • a logical/defensible approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • a logical progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a complete written response based on explanations/ reasoning using the: • properties of operations • relationship between addition and subtraction • relationship between multiplication and division Response may include: • 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 based on own calculations • evaluating the validity of other's responses, approaches and conclusions.	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates an incomplete written response based on explanations/reasoning using the: • properties of operations • relationship between addition and subtraction • relationship between multiplication and division Response may include: • an approach based on a conjecture and/or stated or faulty assumptions • an incomplete or illogical progression of steps • an intrusive calculation error • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations

Grade 5 Math: Reasoning (Sub-Claim C) 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**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
• evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's responses, reasonings, and approaches, utilizing mathematical connections (when appropriate). Provides a counter-example where applicable.	responses, reasonings, and approaches, utilizing mathematical connections (when appropriate).		
Place Value: 5.C.3			
In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well-organized and complete response based on place value system including: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • an efficient and logical progression of steps with appropriate justification • precision of calculation • correct use of grade-level vocabulary, symbols and labels	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well-organized and complete response based on place value system including: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • a logical progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a complete response based on place value system 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 based on own calculations	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates an incomplete response based on place value system which may include: • an approach based on a conjecture and/or stated or faulty assumptions • an incomplete or illogical progression of steps • an intrusive calculation error • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations

Grade 5 Math: Reasoning (Sub-Claim C) 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**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
• justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's responses, approaches and reasoning, and providing a counter-example where applicable.	• evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's responses, approaches and reasoning.	• evaluating the validity of other's responses, approaches and conclusions.	
Concrete Referents and Diagrams: 5.C.4-1, 5.C.4-2, 5.C.4-3, 5.C.4-4, 5.C.5-1, 5.C.5-2, 5.C.5-3, 5.C.6			
In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well-organized and complete response based on operations using concrete referents such as diagrams--including number lines (whether provided in the prompt or constructed by the student) and connecting the diagrams to a written (symbolic) method, which may include: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate)	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well- organized and complete response based on operations using concrete referents such as diagrams--including number lines (whether provided in the prompt or constructed by the student) and connecting the diagrams to a written (symbolic) method, which may include: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • a logical progression of steps	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a complete response based on operations using concrete referents such as diagrams--including number lines (provided in the prompt) – connecting the diagrams to a written (symbolic) method, which may include: • a logical approach based on a conjecture and/or stated assumptions • a logical, but incomplete, progression of steps • minor calculation errors	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates an incomplete response based on operations using concrete referents such as diagrams – including number lines (provided in the prompt) – connecting the diagrams to a written (symbolic) method, which may include: • a conjecture and/or stated or faulty assumptions • an incomplete or illogical progression of steps • an intrusive calculation error

Grade 5 Math: Reasoning (Sub-Claim C) 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**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
• an efficient and logical progression of steps with appropriate justification • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting, and critiquing the validity of other's responses, approaches, and reasoning, and providing a counterexample where applicable	• precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting, and critiquing the validity of other's responses, approaches, and reasoning.	• some use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations. • evaluating the validity of other's responses, approaches and conclusions.	• limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations • accepting the validity of other's responses
Distinguish Correct Explanation/ Reasoning from that which is Flawed: 5.C.7-1, 5.C.7-2, 5.C.7-3, 5.C.7-4, 5.C.8-2			
In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well-organized and complete response by: • analyzing and defending solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equal signs appropriately • evaluating explanation/reasoning if there is a flaw in the argument	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student clearly constructs and communicates a well- organized and complete response by: • analyzing and defending solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equal signs appropriately	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates a complete response by: • analyzing solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equal signs appropriately • distinguishing correct explanation/reasoning fromthat which is flawed	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student constructs and communicates an incomplete response by: • analyzing solutions to scaffolded two-step problems in the form of valid chains of reasoning, sometimes using symbols such as equal signs appropriately

Grade 5 Math: Reasoning (Sub-Claim C) 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**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
• presenting and defending corrected reasoning Response may include: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • an efficient and logical progression of steps with appropriate justification • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's • responses, approaches and reasoning, and providing a counter-example where applicable	• distinguishing correct explanation/reasoning from that which is flawed • identifying and describing the flaw in reasoning or describing errors in solutions to multi-step problems • presenting corrected reasoning Response may include: • a logical approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) • a logical progression of steps • precision of calculation • correct use of grade-level vocabulary, symbols and labels • justification of a conclusion • evaluation of whether an argument or conclusion is generalizable • evaluating, interpreting and critiquing the validity of other's responses, approaches and reasoning	• identifying and describing the flaw in reasoning or describing errors in solutions to multi-step problems • presenting corrected reasoning Response may include: • 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 based on own calculations • evaluating the validity of other's responses, approaches and conclusions.	• distinguishing correct explanation/reasoning from that which is flawed • identifying an error in reasoning Response may include: • a conjecture based on faulty assumptions • an incomplete or illogical progression of steps • an intrusive calculation error • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations • accepting the validity of other's responses

Grade 5 Math: Modeling (Sub-Claim D) 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 (or for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), 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 the making use of structure and/or looking for and expressing regularity in repeated reasoning.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
Modeling: 5.D.1, 5.D.2			
In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student devises a plan and applies mathematics to solve multi-step, real-world contextual word problems by: • using stated assumptions or making assumptions and using 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 • justifying and defending models which lead to a conclusion • interpreting mathematical results in the context of the situation	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student devises a plan and applies mathematics to solve multi-step, real- world contextual word problems by: • using stated assumptions or making assumptions and using 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 • interpreting mathematical results in the context of the situation • reflecting on whether the results make sense • modifying and/or improving the model if it has not served its purpose	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student devises a plan and applies mathematics to solve multi-step, real-world contextual word problems 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 • interpreting mathematical results in a simplified context • reflecting on whether the results make sense • modifying the model if it has not served its purpose • writing an arithmetic expression or equation to describe a situation	In connection with the content knowledge, skills, and abilities described in Sub-claim A, the student devises a plan and applies mathematics to solve multi-step, real-world contextual word problems 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 arithmetic expression or equation to describe a situation

Grade 5 Math: Modeling (Sub–Claim D) 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 (or for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), 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 the making use of structure and/or looking for and expressing regularity in repeated reasoning.			
Exceeds Expectations	**Meets Expectations**	**Approaches Expectations**	**Partially or Does Not Yet Meet Expectations**
• reflecting on whether the results make sense • improving the model if it has not served its purpose • writing a concise arithmetic expression or equation to describe a situation	• writing an arithmetic expression or equation to describe a situation		