

Performance Level Descriptors – Grade 4 Mathematics

	Grade 4 Math : Sub-Claim A			
	The student solves problems involving the Major Content for the grade/course with connections to the Standards for Mathematical Practice.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
Fractions and Decimals 4.NF.1-2 4.NF.2-1 4.NF.A.Int.1 4.NF.5 4.NF.6 4.NF.7	<p>Compares decimals to hundredths; uses decimal notations for fractions (tenths and hundredths); compares fractions, with like or unlike numerators and denominators, by creating equivalent fractions with common denominators, comparing to a benchmark fraction and generating equivalent fractions.</p> <p>Recognizes that decimals and fractions must refer to the same whole in order to compare.</p> <p>Shows results using symbols.</p> <p>Demonstrates the use of conceptual understanding of fractional equivalence and ordering when solving simple word problems requiring fraction</p>	<p>Compares decimals to hundredths; uses decimal notations for fractions (tenths and hundredths); compares fractions, with like or unlike numerators and denominators, by creating equivalent fractions with common denominators, comparing to a benchmark fraction and generating equivalent fractions.</p> <p>Recognizes that decimals and fractions must refer to the same whole in order to compare.</p> <p>Shows results using symbols.</p> <p>Demonstrates the use of conceptual understanding of fractional equivalence and ordering when solving simple word problems requiring fraction</p>	<p>Given a visual model and/or manipulatives, compares decimals to hundredths; uses decimal notations for fractions (tenths and hundredths); compares fractions, with like or unlike numerators and denominators, by creating equivalent fractions with common denominators and comparing to a benchmark fraction.</p> <p>Recognizes that decimals and fractions must refer to the same whole in order to compare.</p> <p>Shows results using symbols.</p> <p>Solves simple word problems requiring fraction comparison.</p>	<p>Given a visual model and/or manipulatives, compares decimals to hundredths; uses decimal notations for fractions (tenths and hundredths); compares fractions, with like or unlike numerators and denominators by comparing to a benchmark fraction.</p> <p>Recognizes that decimals and fractions must refer to the same whole in order to compare.</p> <p>Shows results using symbols.</p> <p>Solves simple word problems requiring fraction comparison with scaffolding.</p>

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	<p>comparison.</p> <p>Converts a simple fraction to a denominator of 10 or 100 and rewrites as a decimal (e.g., $1/2$, $1/4$, $1/20$).</p> <p>Adds fractions with denominators of 10 and 100.</p>	<p>comparison.</p> <p>Adds fractions with denominators of 10 and 100.</p>		
<p>Building Fractions</p> <p>4.NF.3a 4.NF.3b-1 4.NF.3c 4.NF.3d</p>	<p>Creates and solves mathematical and real-world problems involving the addition and subtraction of fractions and mixed numbers with like denominators by joining and separating parts referring to the same whole.</p> <p>Decomposes a fraction into a sum of fractions with the same denominator in more than one way and records the decomposition using an equation.</p>	<p>Understands and solves mathematical and real-world problems involving the addition and subtraction of fractions and mixed numbers with like denominators by joining and separating parts referring to the same whole.</p> <p>Decomposes a fraction into a sum of fractions with the same denominator in more than one way and records the decomposition using an equation.</p>	<p>Using visual models and/or manipulatives, solves mathematical and word problems involving the addition and subtraction of fractions and mixed numbers with like denominators by joining and separating parts referring to the same whole.</p> <p>Decomposes a fraction into a sum of fractions with the same denominator in more than one way and records the decomposition using an equation.</p>	<p>Using visual models and/or manipulatives, solves mathematical problems involving the addition and subtraction of fractions with like denominators by joining and separating parts referring to the same whole.</p> <p>Decomposes a fraction into a sum of fractions with the same denominator in more than one way and records the decomposition using an equation.</p>

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Multiplying Fractions 4.NF.4a 4.NF.4 b-1 4.NF.4 b-2 4.NF.4 c	Creates a visual fraction model and solves mathematical and real-world problems by recognizing that fraction a/b is a multiple of $1/b$ and uses that construct to multiply a fraction by a whole number.	Understands and solves mathematical and real-world problems by recognizing that fraction a/b is a multiple of $1/b$ and uses that construct to multiply a fraction by a whole number.	Using visual models and/or manipulatives, solves mathematical and real-world problems by recognizing that fraction a/b is a multiple of $1/b$ and uses that construct to multiply a fraction by a whole number.	Using visual models and/or manipulatives, solves mathematical problems by recognizing that fraction a/b is a multiple of $1/b$ and uses that construct to multiply a fraction by a whole number.
Solving with Multiplication 4.OA.1-1, 4.OA. 1-2 4.OA.2	Interprets multiplication equations as comparisons and represents statements of multiplicative comparisons as multiplicative equations. Distinguishes multiplicative comparisons. Uses multiplication or division to solve word problems involving multiplicative comparisons. Uses a symbol for the unknown number. Creates real-world	Interprets multiplication equations as comparisons and represents statements of multiplicative comparisons as multiplicative equations. Distinguishes multiplicative comparisons. Uses multiplication or division to solve word problems involving multiplicative comparisons. Uses a symbol for the unknown number.	Interprets multiplication equations as comparisons or represents statements of multiplicative comparisons as multiplicative equations. Uses multiplication or division to solve word problems involving multiplicative comparisons.	Interprets multiplication equations as comparisons or represents statements of multiplicative comparisons as multiplicative equations. Uses multiplication or division to solve scaffolded problems involving multiplicative comparisons.

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	problems that would be solved using multiplicative comparison.			
Multi-step Problems 4.OA.3-1 4.OA. 3-2 4.NBT.5-1 4.NBT. 5-2 4.NBT.6-1 4.NBT.6-2	<p>Solves multiple-step word and other problems using the four operations with whole numbers: in multiplying a three- or four-digit by a one-digit number or two two-digit numbers.</p> <p>Finds whole number quotients and remainders with up to four-digit dividends and one-digit divisors and interprets remainders as appropriate.</p> <p>Chooses from a variety of strategies to solve these problems and selects an appropriate context for the task.</p>	<p>Solves multiple-step word and other problems using the four operations with whole numbers: in multiplying a three- or four-digit by a one-digit number or two two-digit numbers.</p> <p>Finds whole number quotients and remainders with up to four-digit dividends and one-digit divisors and interprets remainders as appropriate.</p> <p>Chooses from a variety of strategies to solve these problems.</p>	<p>Solves two-step word and other problems using the four operations with whole numbers: in multiplying a three-digit by a one-digit number or two two-digit numbers.</p> <p>Finds whole number quotients and remainders with up to three-digit dividends and one-digit divisors and interprets remainders as appropriate.</p> <p>Chooses from a variety of strategies to solve these problems.</p>	<p>Solves one-step word and other problems using the four operations with whole numbers: in multiplying a three-digit by a one-digit number or two two-digit numbers.</p> <p>Finds whole number quotients and remainders with up to three-digit dividends and one-digit divisors.</p> <p>Chooses from a variety of strategies to solve these problems. Can only solve two-step problems when scaffolding is provided for each step.</p>

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Place Value 4.NBT.1 4.NBT.2 4.NBT.3 4.NBT.Int.1	In any multi-digit whole number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right. Reads, writes and compares multi-digit whole numbers using base-10 numerals, number names in expanded form and inequality symbols ($>$, $<$, $=$), and rounds to any place and chooses appropriate context given a rounded number . Performs computations by applying conceptual understanding of place value, rather than by applying multi-digit algorithms.	In any multi-digit whole number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right. Reads, writes and compares multi-digit whole numbers using base-10 numerals, number names in expanded form and inequality symbols ($>$, $<$, $=$), and rounds to any place. Performs computations by applying conceptual understanding of place value, rather than by applying multi-digit algorithms.	In any four-digit whole number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right. Reads, writes and compares four-digit whole numbers using base-10 numerals, number names in expanded form and inequality symbols ($>$, $<$, $=$), and rounds to any place	In any three-digit whole number, recognizes a digit in one place represents 10 times as much as it represents in the place to its right. Reads, writes and compares three-digit whole numbers using base-10 numerals, number names in expanded form and inequality symbols ($>$, $<$, $=$), and rounds to any place with scaffolding.

Performance Level Descriptors – Grade 4 Mathematics

	Grade 4 Math: 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.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
Operations and Factors 4.OA.4-1 4.OA.4-2 4.OA.4-3 4.OA.4-4	<p>Recognizes that a whole number is a multiple of each of its factors, and within the range of 1-100 finds all factor pairs and determines multiples of whole numbers.</p> <p>Determines whether a whole number in the range 1-100 is prime or composite.</p>	<p>Recognizes that a whole number is a multiple of each of its factors, and within the range of 1-100 finds factor pairs and determines multiples of whole numbers.</p> <p>Determines whether a whole number in the range 1-100 is prime or composite.</p>	<p>Recognizes that a whole number is a multiple of each of its factors, and within the range of 1-100 finds factor pairs or determines multiples of whole numbers.</p> <p>Determines whether a whole number in the range 1-100 is prime or composite.</p>	<p>Recognizes that a whole number is a multiple of each of its factors, and within the range of 1-100 finds factor pairs or determines multiples of whole numbers using a hundreds chart.</p> <p>Determines whether a whole number in the range 1-100 is prime or composite.</p>
Measurement and Conversion 4.MD.1 4.MD.2-1 4.MD.2-2 4.MD.3	<p>Solves problems which include calculating area and perimeter – including those in which side lengths are missing – and simple fractions and decimals using all four operations.</p> <p>Records measurement equivalents in a two-column table.</p> <p>Uses knowledge of measurement units within one system to solve word</p>	<p>Solves problems which include calculating area and perimeter – including those in which side lengths are missing – and simple fractions and decimals using all four operations.</p> <p>Records measurement equivalents in a two-column table.</p> <p>Uses knowledge of measurement units within one system to solve word</p>	<p>Solves problems which include calculating area and perimeter – when information about side lengths is provided – and simple fractions and decimals using all four operations.</p> <p>Records measurement equivalents in a two-column table.</p> <p>Uses knowledge of measurement units within one system to solve word</p>	<p>Solves mathematical problems which include use of conversions of simple fractions or decimals using all four operations.</p> <p>Records measurement equivalents in a two-column table.</p> <p>Uses knowledge of measurement units within one system to convert from</p>

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	problems, real-world problems, and mathematical problems involving converting from larger units to smaller units, Represents measurement quantities using diagrams such as number line diagrams that require students to provide the appropriate measurement scale given the context.	problems, real-world problems, and mathematical problems involving converting from larger units to smaller units. Represents measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	problems, real-world problems and mathematical problems involving converting from larger units to smaller units. Represents measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	larger units to smaller units.
Represent and Interpret Data 4.MD.4-1 4.MD.4-2	Makes a line plot to display a data set of measurements in fractions of a unit with denominators limited to 2, 4 and 8, and uses addition and subtraction of fractions to solve problems involving information in the line plots and evaluates the solution in relation to the data.	Makes a line plot to display a data set of measurements in fractions of a unit with denominators limited to 2, 4 and 8 , and uses addition and subtraction of fractions to solve problems involving information in the line plots.	Makes a line plot to display a data set of measurements in fractions of a unit with like denominators of 2 or 4, and uses addition and subtraction of fractions to solve problems involving information in the line plot.	Makes a line plot to display a data set of measurements in fractions of a unit with like denominators of 2 or 4.
Geometric Measurement 4.MD.5	Recognizes how angles are formed and that angle measures are additive. Understands and applies	Recognizes how angles are formed and that angle measures are additive. Understands and applies	Understands and applies concepts of angle measurement.	Understands and applies concepts of angle measurement.

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4.MD.6 4.MD.7	<p>concepts of angle measurement recognizing that angles are measured in reference to a circle.</p> <p>Uses a protractor to measure and sketch angles.</p> <p>Solves mathematical and real world problems by composing and decomposing angles with equations.</p> <p>Creates or solves real-world problems using understanding of angles.</p>	<p>concepts of angle measurement recognizing that angles are measured in reference to a circle.</p> <p>Uses a protractor to measure and sketch angles.</p> <p>Solves mathematical and real world problems by composing and decomposing angles with equations.</p>	<p>Uses a protractor to measure and sketch angles.</p> <p>Solves mathematical and real world problems by composing and decomposing angles.</p>	<p>Uses a protractor to measure angles.</p>
Lines, Angles and Shapes 4.G.1 4.G.2 4.G.3	<p>Draws and identifies points, lines, line segments, rays, angles (right, obtuse and acute), perpendicular lines, parallel lines, lines of symmetry and right triangles, and use any of these to classify two-dimensional figures.</p> <p>Creates two-dimensional figures based on given properties.</p>	<p>Draws and identifies points, lines, line segments, rays, angles (right, obtuse and acute), perpendicular lines, parallel lines, lines of symmetry and right triangles, and use any of these to classify two-dimensional figures.</p>	<p>Draws and identifies points, lines, line segments, rays, angles (right, obtuse and acute), perpendicular lines, parallel lines, lines of symmetry and right triangles, and use some of these to classify two-dimensional figures.</p>	<p>Identifies points, lines, line segments, rays, angles (right, obtuse and acute), perpendicular lines, parallel lines, lines of symmetry and right triangles, and use some of these to classify quadrilaterals and triangles.</p>

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Generate and Analyze Patterns 4.OA.5	Generates a number or shape pattern that follows a given rule, identifies apparent features of the pattern that were not explicit in the rule itself and expresses the pattern using a formula.	Generates a number or shape pattern that follows a given rule and identifies apparent features of the pattern that were not explicit in the rule itself.	Generates a number or shape pattern that follows a given rule and identifies explicit features of the pattern.	Generates a number or shape pattern that follows a given rule.

Performance Level Descriptors – Grade 4 Mathematics

	Grade 4 Math: Sub-Claim C			
	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.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
Properties of Operations 4.C.1-1 4.C.1-2 4.C.2 4.C.3	<p>Clearly constructs and communicates a complete written response based on explanations/reasoning using the:</p> <ul style="list-style-type: none"> properties of operations relationship between addition and subtraction relationship between multiplication and division identification of arithmetic patterns <p>Response may include:</p> <ul style="list-style-type: none"> a logical/defensible approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) an efficient and logical progression of steps 	<p>Clearly constructs and communicates a complete written response based on explanations/reasoning using the:</p> <ul style="list-style-type: none"> properties of operations relationship between addition and subtraction relationship between multiplication and division identification of arithmetic patterns <p>Response may include:</p> <ul style="list-style-type: none"> a logical/defensible approach based on a conjecture and/or stated assumptions, utilizing mathematical connections (when appropriate) a logical progression of steps 	<p>Constructs and communicates a written response based on explanations/reasoning using the:</p> <ul style="list-style-type: none"> properties of operations relationship between addition and subtraction relationship between multiplication and division identification of arithmetic patterns <p>Response may include:</p> <ul style="list-style-type: none"> a logical approach based on a conjecture and/or stated assumptions a logical, but incomplete, progression of steps minor calculation errors 	<p>Constructs and communicates an incomplete written response based on explanations/reasoning using the:</p> <ul style="list-style-type: none"> properties of operations relationship between addition and subtraction relationship between multiplication and division identification of arithmetic patterns <p>Response may include:</p> <ul style="list-style-type: none"> an approach based on a conjecture and/or stated or faulty assumptions an incomplete or illogical progression of steps

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Grade 4 Math: Sub-Claim C				
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.				
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
	<p>with appropriate justification</p> <ul style="list-style-type: none"> • 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, reasonings, and approaches, utilizing mathematical connections (when appropriate). Provides a counter-example where applicable. 	<ul style="list-style-type: none"> • 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, reasonings, and approaches, utilizing mathematical connections (when appropriate). 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • an intrusive calculation error • limited use of grade-level vocabulary, symbols and labels • partial justification of a conclusion based on own calculations
Concrete Referents and Diagrams	Clearly constructs and communicates a well-organized and complete response based on	Clearly constructs and communicates a well-organized and complete response based on	Constructs and communicates a complete response based on operations using concrete	Constructs and communicates an incomplete response based on operations using

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Grade 4 Math: Sub-Claim C				
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.				
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4.C.4-1 4.C.4-2 4.C.4-3 4.C.4-4 4.C.4-5 4.C.7-1 4.C.7-2 4.C.7-3 4.C.7-4	<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>referents such as diagrams – including number lines (provided in the prompt) – connecting the diagrams to a written (symbolic) method, which may include:</p> <ul style="list-style-type: none"> • 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. 	<p>concrete referents such as diagrams – including number lines (provided in the prompt) – connecting the diagrams to a written (symbolic) method, which may include:</p> <ul style="list-style-type: none"> • 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

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	Grade 4 Math: Sub-Claim C			
	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.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
	<ul style="list-style-type: none"> 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. 	<p style="text-align: center;">conclusion is generalizable</p> <ul style="list-style-type: none"> evaluating, interpreting, and critiquing the validity of other’s responses, approaches, and reasoning. 	<ul style="list-style-type: none"> evaluating the validity of other’s responses, approaches and conclusions 	<ul style="list-style-type: none"> accepting the validity of other’s responses.
<p>Distinguish Correct Explanation/ Reasoning from that which is Flawed</p> <p>4.C.5-1 4.C.5-2 4.C.5-3 4.C.5-4 4.C.5-5 4.C.6-1 4.C.6-2 4.C.6-3 4.C.8</p>	<p>Clearly constructs and communicates a well-organized and complete response by:</p> <ul style="list-style-type: none"> presenting 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 	<p>Clearly constructs and communicates a well-organized and complete response by:</p> <ul style="list-style-type: none"> presenting and defending solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equal signs appropriately distinguishing correct explanation/reasoning from that which is 	<p>Constructs and communicates a complete response by:</p> <ul style="list-style-type: none"> presenting solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equal signs appropriately distinguishing correct explanation/reasoning from that which is flawed 	<p>Constructs and communicates an incomplete response by:</p> <ul style="list-style-type: none"> presenting solutions to scaffolded two-step problems in the form of valid chains of reasoning, sometimes using symbols such as equal signs appropriately distinguishing correct explanation/reasoning

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Grade 4 Math: Sub-Claim C				
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.				
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
	<ul style="list-style-type: none"> argument presenting and defending corrected reasoning <p>Response may include:</p> <ul style="list-style-type: none"> 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 	<p>flawed</p> <ul style="list-style-type: none"> identifying and describing the flaw in reasoning or describing errors in solutions to multi-step problems presenting corrected reasoning <p>Response may include:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> identifying and describing the flaw in reasoning or describing errors in solutions to multi-step problems presenting corrected reasoning <p>Response may include:</p> <ul style="list-style-type: none"> 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, 	<p>from that which is flawed</p> <ul style="list-style-type: none"> identifying an error in reasoning <p>Response may include:</p> <ul style="list-style-type: none"> 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.

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	Grade 4 Math: Sub-Claim C			
	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.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
	argument or conclusion is generalizable <ul style="list-style-type: none"> evaluating, interpreting and critiquing the validity of other’s responses, approaches and reasoning, and providing a counter-example where applicable. 	is generalizable <ul style="list-style-type: none"> evaluating, interpreting and critiquing the validity of other’s responses, approaches and reasoning. 	approaches and conclusions.	

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Grade 4 Math: Sub-Claim D				
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.				
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
Modeling 4.D.1 4.D.2	Devises a plan and applies mathematics to solve multi-step, real-world contextual word problems by: <ul style="list-style-type: none"> • 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 	Devises a plan and applies mathematics to solve multi-step, real-world contextual word problems by: <ul style="list-style-type: none"> • 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 	Devises a plan and applies mathematics to solve multi-step, real-world contextual word problems by: <ul style="list-style-type: none"> • 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 	Devises a plan and applies mathematics to solve multi-step, real-world contextual word problems by: <ul style="list-style-type: none"> • 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

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Grade 4 Math: Sub-Claim D				
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.				
Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command	
<ul style="list-style-type: none"> • justifying and defending models which lead to a conclusion • interpreting mathematical results in the context of the situation • 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 	<p>situation</p> <ul style="list-style-type: none"> • reflecting on whether the results make sense • modifying and/or improving the model if it has not served its purpose • writing an arithmetic expression or equation to describe a situation 	<p>the results make sense</p> <ul style="list-style-type: none"> • modifying the model if it has not served its purpose • writing an arithmetic expression or equation to describe a situation 		

Performance Level Descriptors – Grade 4 Mathematics

	Grade 4 Math: Sub-Claim E			
	The student demonstrates fluency in areas set forth in the Standards for Content in grades 3-6.			
	Level 5: Distinguished Command	Level 4: Strong Command	Level 3: Moderate Command	Level 2: Partial Command
Fluency 4.NBT.4-1 4.NBT.4-2	Accurately and quickly adds and subtracts multi-digit whole numbers using the standard algorithm. Knows from memory 100 percent of the sums and differences on items in less than the allotted time on items which are timed.	Accurately and in a timely manner adds or subtracts multi-digit whole numbers using the standard algorithm. Knows from memory 100 percent of the sums and differences on items in the allotted time on items which are timed.	Accurately adds and subtracts multi-digit whole numbers using the standard algorithm. Knows from memory more than 80 percent and less than 100 percent of the sums and differences on items which are timed.	Adds and subtracts multi-digit whole numbers using the standard algorithm with some level of accuracy. Knows from memory greater than or equal to 70 percent and less than or equal to 80 percent of the sums and differences on items which are timed.