



# Mathematics Interim Assessment Blocks

## 2017-18 Blueprint

V.07.12.2017

The Smarter Balanced Interim Assessment Blocks (IABs) are one of two distinct types of interim assessments being made available by the Consortium; the other type is the Interim Comprehensive Assessment (ICAs). IABs are short, focused sets or blocks of items that measure one or more assessment targets. Results from these assessments provide information about a student's strengths or needs in relation to the Common Core State Standards (CCSS) and, therefore, generate more detailed information for instructional purposes than the summative or ICAs alone. The IABs are currently available as fixed forms. The fixed forms are administered online, using the same delivery software as the summative assessments.

This blueprint presents the specific blocks that are available by grade level for mathematics beginning at grade 3 and continuing through high school. Each block-level blueprint contains information about claim(s), assessment target(s), and depth of knowledge level(s) addressed by the items in that block as well as the numbers of items allocated to each of those categories.

The blueprint can be used by educators to plan how to integrate the IABs effectively within classroom instruction or to better understand results that are reported. Users of the blueprint can become familiar with the number of IABs for each grade level, the general focus of each IAB, (i.e. which assessment targets are addressed in a specific IAB and the emphasis of each target relative to the other targets in the block). A fifth-grade teacher, for example, may wish to collect more information regarding her students' knowledge about geometry. The teacher could use this blueprint to see that there is a block for geometry composed of 13 machined-scored items across the four claims—concepts and procedures, problem solving, modeling and data analysis, and communicating reasoning. After reading the blueprint, she will have a better understanding of the meaning of the geometry block.

## Mathematics Interim Assessment Blocks

Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	Operations and Algebraic Thinking	Operations and Algebraic Thinking
Number and Operations – Fractions	Number and Operations – Fractions	Number and Operations – Fractions
Measurement and Data	Measurement and Data	Measurement and Data
Number and Operations in Base Ten	Number and Operations in Base Ten	Number and Operations in Base Ten
Geometry*	Geometry	Geometry
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	Ratio and Proportional Relationships	Expressions & Equations I
The Number System	The Number System	Expressions & Equations II (with Prob/Stat)
Expressions and Equations	Expressions and Equations	The Number System*
Geometry	Geometry	Functions
Statistics and Probability	Statistics and Probability	Geometry
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

High School	
Algebra and Functions I - Linear Functions, Equations, and Inequalities	Geometry Congruence*
Algebra and Functions II - Quadratic Functions, Equations, and Inequalities	Geometry Measurement and Modeling*
Geometry and Right Triangle Trigonometry	Interpreting Functions*
Statistics and Probability	Number and Quantity*
Seeing Structure in Expressions/Polynomial Expressions*	Mathematics Performance Task

\* IAB is new for 2017–18

## GRADE 3

Grade 3 – Operations and Algebraic Thinking (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	OA	A. Represent and solve problems involving multiplication and division.	1, 2	4	12
		B. Understand properties of multiplication and the relationship between multiplication and division.	1	2	
		C. Multiply and divide within 100.	1	2	
		D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
C. State logical assumptions being used.	2, 3				
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					

## GRADE 3 (continued)

Grade 3 – Number and Operations – Fractions (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NF	F. Develop understanding of fractions as numbers.	1, 2	13	13
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
		3. Communicating Reasoning	Communicating Reasoning		
B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4				
C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3				

## GRADE 3 (continued)

Grade 3 – Measurement and Data (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	MD	G. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1, 2	4	12
		H. Represent and interpret data.	2, 3	2	
		I. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1, 2	4	
		J. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	1	2	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving Claim 2	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis Claim 4	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.	2, 3, 4		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.			
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
	C. State logical assumptions being used.	1, 2, 3			
	F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	3, 4			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					

## GRADE 3 (continued)

Grade 3 – Geometry (12 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	K. Reason with shapes and their attributes.	1, 2	12	12
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

## GRADE 3 (continued)

Grade 3 – Number and Operations in Base Ten (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	12	12
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

## GRADE 3 (continued)

Grade 3 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	2	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning		Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.		
	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.		2, 3, 4		
	C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.		2, 3		

## GRADE 4

Grade 4 – Operations and Algebraic Thinking (16 items)						
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category	
1. Concepts and Procedures	OA	A. Use the four operations with whole numbers to solve problems.	1, 2	4	9	
		B. Gain familiarity with factors and multiples.	1, 2	4		
		C. Generate and analyze patterns.	2, 3	1		
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	5	
		B. Select and use appropriate tools strategically.	1, 2, 3			C. Interpret results in the context of a situation.
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	3		
		D. Interpret results in the context of a situation.	2, 3, 4			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.				1, 2, 3
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.				
		C. State logical assumptions being used.				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	2	2	
						D. Use the technique of breaking an argument into cases.
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.				
		C. State logical assumptions being used.				2, 3
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.						

## GRADE 4 (continued)

Grade 4 – Number and Operations in Base Ten (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	D. Generalize place value understanding for multi-digit whole numbers.	1, 2	5	12
		E. Use place value understanding and properties of operations to perform multi-digit arithmetic.	1	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
		C. State logical assumptions being used.	1, 2, 3		
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	2	2
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					

## GRADE 4 (continued)

Grade 4 – Number and Operations – Fractions (15 items)						
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category	
1. Concepts and Procedures	NF	F. Extend understanding of fraction equivalence and ordering.	1, 2	5	12	
		G. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	1, 2	5		
		H. Understand decimal notation for fractions, and compare decimal fractions.	1, 2	2		
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1	
		B. Select and use appropriate tools strategically.	1, 2, 3			
		C. Interpret results in the context of a situation.				
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0		
		D. Interpret results in the context of a situation.				
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4			
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.				
3. Communicating Reasoning	Communicating Reasoning	C. State logical assumptions being used.	1, 2, 3			
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4			
		A. Test propositions or conjectures with specific examples.	2, 3	2	2	
		D. Use the technique of breaking an argument into cases.				
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.				
C. State logical assumptions being used.	2, 3					
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.						

## GRADE 4 (continued)

Grade 4 – Geometry (11 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	L. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	0	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
		3. Communicating Reasoning	Communicating Reasoning		
B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4				
C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3				

## GRADE 4 (continued)

Grade 4 – Measurement and Data (15 items)						
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category	
1. Concepts and Procedures	MD	I. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	1, 2	6	13	
		J. Represent and interpret data.	1, 2	2		
		K. Geometric measurement: understand concepts of angle and measure angles.	1, 2	5		
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	
		B. Select and use appropriate tools strategically.	1, 2, 3			
		C. Interpret results in the context of a situation.				
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1		
		D. Interpret results in the context of a situation.				
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4			
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.				
C. State logical assumptions being used.						
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4					
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	0	0	
		D. Use the technique of breaking an argument into cases.				
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.				
		C. State logical assumptions being used.	2, 3			
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.						

## GRADE 4 (continued)

Grade 4 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	2	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.		1, 2, 3			
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	2	
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					

## GRADE 5

Grade 5 – Number and Operations in Base Ten (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NBT	C. Understand the place value system.	1, 2	4	11
		D. Perform operations with multi-digit whole numbers and with decimals to hundredths.	1, 2	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

## GRADE 5 (continued)

Grade 5 – Number and Operations – Fractions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NF	E. Use equivalent fractions as a strategy to add and subtract fractions.	1, 2	5	11
		F. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.		2, 3, 4	
		D. Interpret results in the context of a situation.	1, 2, 3		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		3, 4	
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		

## GRADE 5 (continued)

Grade 5 – Measurement and Data (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	MD	G. Convert like measurement units within a given measurement system.	1	1	9
		H. Represent and interpret data.	1, 2	2	
		I. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	4
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	1	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
		A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3		
		Communicating Reasoning	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4	
C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3				

## GRADE 5 (continued)

Grade 5 – Geometry (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	J. Graph points on the coordinate plane to solve real-world and mathematical problems.	1	5	9
		K. Classify two-dimensional figures into categories based on their properties.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
	C. Interpret results in the context of a situation.				
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.	2, 3, 4		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.			
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	1, 2, 3		
C. State logical assumptions being used.		3, 4			
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.					
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	2	2
		D. Use the technique of breaking an argument into cases.	2, 3, 4		
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3		
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			

## GRADE 5 (continued)

Grade 5 – Operations and Algebraic Thinking (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	OA	A. Write and interpret numerical expressions.	1	9	13
		B. Analyze patterns and relationships.	2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3		
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
3. Communicating Reasoning	Communicating Reasoning	C. State logical assumptions being used.	1, 2, 3	0	0
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	3, 4		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.			
		A. Test propositions or conjectures with specific examples.	2, 3		
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			

## GRADE 5 (continued)

Grade 5 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	2	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
		3. Communicating Reasoning	Communicating Reasoning		
B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4				
C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3				

## GRADE 6

Grade 6 – Ratio and Proportional Relationships (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	RP	A. Understand ratio concepts and use ratio reasoning to solve problems.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0	
		D. Interpret results in the context of a situation.			
B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		2, 3, 4			
E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.					
	C. State logical assumptions being used.	1, 2, 3			
	F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					
	G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)				

## GRADE 6 (continued)

Grade 6 – Expressions and Equations (16 items)						
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category	
1. Concepts and Procedures	EE	E. Apply and extend previous understandings of arithmetic to algebraic expressions.	1	3	13	
		F. Reason about and solve one-variable equations and inequalities.	1, 2	6		
		G. Represent and analyze quantitative relationships between dependent and independent variables.	2	4		
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2	
		B. Select and use appropriate tools strategically.	1, 2, 3			
		C. Interpret results in the context of a situation.				
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1		
		D. Interpret results in the context of a situation.				
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4			
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.				
C. State logical assumptions being used.						
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4					
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1	
		D. Use the technique of breaking an argument into cases.				
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.				
		C. State logical assumptions being used.	2, 3			
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.				
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)						

## GRADE 6 (continued)

Grade 6 – Geometry (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	H. Solve real-world and mathematical problems involving area, surface area, and volume.	2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 6 (continued)

Grade 6 – The Number System (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NS	B. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	1, 2	2	13
		C. Compute fluently with multi-digit numbers and find common factors and multiples.	1, 2	5	
		D. Apply and extend previous understandings of numbers to the system of rational numbers.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.		3, 4			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 6 (continued)

Grade 6 – Statistics and Probability (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	I. Develop understanding of statistical variability.	2	3	13
		J. Summarize and describe distributions.	1, 2	10	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.		3, 4			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 6 (continued)

Grade 6 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 7

Grade 7 – Ratio and Proportional Relationships (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	RP	A. Analyze proportional relationships and use them to solve real-world and mathematical problems.	2	10	10
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).		1	
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3		
		D. Interpret results in the context of a situation.			
B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		2, 3, 4			
E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.					
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 7 (continued)

Grade 7 – The Number System (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NS	B. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 7 (continued)

Grade 7 – Expressions and Equations (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE	C. Use properties of operations to generate equivalent expressions.	1, 2	5	12
		D. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	1, 2	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	1	1
		D. Use the technique of breaking an argument into cases.	2, 3, 4		
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 7 (continued)

Grade 7 – Geometry (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	E. Draw, construct, and describe geometrical figures and describe the relationship between them.	1, 2	5	11
		F. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	0	0
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 7 (continued)

Grade 7 – Statistics and Probability (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	G. Use random sampling to draw inferences about a population.	1, 2	3	13
		H. Draw informal comparative inferences about two populations.	2	4	
		I. Investigate chance processes and develop, use, and evaluate probability models.	1, 2	6	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	2	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	0	0
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 7 (continued)

Grade 7 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 8

Grade 8 – Expressions & Equations I (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE	B. Work with radicals and integer exponents.	1, 2	3	9
		C. Understand the connections between proportional relationships, lines, and linear equations.	1, 2	2	
		D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2	4	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	3
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.		2, 3, 4	
		D. Interpret results in the context of a situation.	1, 2, 3		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		3, 4	
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
3. Communicating Reasoning	Communicating Reasoning	G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	2	2
		A. Test propositions or conjectures with specific examples.	2, 3		
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 8 (continued)

Grade 8 – Expressions & Equations II with Statistics (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	EE SP	D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2	5	10
		J. Investigate patterns of association in bivariate data.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.		2, 3, 4	
		D. Interpret results in the context of a situation.	1, 2, 3		
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		3, 4	
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
3. Communicating Reasoning	Communicating Reasoning	G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	2, 3	1	1
		A. Test propositions or conjectures with specific examples.			
		D. Use the technique of breaking an argument into cases.	2, 3, 4		
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.			
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3		
C. State logical assumptions being used.					
F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.					
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## GRADE 8 (continued)

Grade 8 – The Number System (13 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NS	A. Know that there are numbers that are not rational, and approximate them by rational numbers.	1, 2	13	13
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	0	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	0	0
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 8 (continued)

Grade 8 – Functions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	F	E. Define, evaluate, and compare functions.	1, 2	6	11
		F. Use functions to model relationships between quantities.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	1, 2, 3		
		C. State logical assumptions being used.			
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	2
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)			

## GRADE 8 (continued)

Grade 8 – Geometry (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	G. Understand congruence and similarity using physical models, transparencies, or geometry software.	1, 2	5	13
		H. Understand and apply the Pythagorean Theorem.	1, 2	5	
		I. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	1, 2	3	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	1, 2, 3		
		C. State logical assumptions being used.			
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## GRADE 8 (continued)

Grade 8 – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2	
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3		

## High School

### High School – Algebra and Functions I – Linear Functions, Equations, and Inequalities (15 items)

Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	A, F	G. Create equations that describe numbers or relationships.	1, 2	1	11
		I. Solve equations and inequalities in one variable.	1, 2	3	
		J. Represent and solve equations and inequalities graphically.	1, 2	4	
		L. Interpret functions that arise in applications in terms of a context.	1, 2	1	
		M. Analyze functions using different representations.	1, 2, 3	1	
		N. Build a function that models a relationship between two quantities.	2	1	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	2	3
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
		D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	1	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	1, 2, 3		
		C. State logical assumptions being used.			
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
		G. At later grades, determine conditions under which an argument does and does not apply.			

## High School (continued)

### High School – Algebra and Functions II – Quadratic Functions, Equations, and Inequalities (15 items)

Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	A, F	G. Create equations that describe numbers or relationships.	1, 2	1	12
		H. Understand solving equations as a process of reasoning and explain the reasoning.	1, 2	3	
		I. Solve equations and inequalities in one variable.	1, 2	1	
		J. Represent and solve equations and inequalities graphically.	1, 2	3	
		L. Interpret functions that arise in applications in terms of a context.	1, 2	1	
		M. Analyze functions using different representations.	1, 2, 3	2	
		N. Build a function that models a relationship between two quantities.	2	1	
2. Problem Solving  4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	2
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	2	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
3. Communicating Reasoning	Communicating Reasoning	C. State logical assumptions being used.	1, 2, 3	1	1
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	2, 3		
		G. At later grades, determine conditions under which an argument does and does not apply.			
		A. Test propositions or conjectures with specific examples.	2, 3		
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			

## High School (continued)

High School – Geometry and Right Triangle Trigonometry (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	G	O: Define trigonometric ratios and solve problems involving right triangles.	1, 2	11	11
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.					
C. State logical assumptions being used.					
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3				
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	3	3
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)					

## High School (continued)

High School – Number and Quantity (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NQ	A. Extend the properties of exponents to rational exponents.	1, 2	4	11
		B. Use properties of rational and irrational numbers.	1, 2	2	
		C. Reason quantitatively and use units to solve problems.	1, 2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.	1, 2, 3				
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).					
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	3	3
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply.					

## High School (continued)

High School – Interpreting Functions (14 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	NQ	K. Understand the concept of a function and use function notation.	1, 2	3	10
		L. Interpret functions that arise in applications in terms of the context.	1, 2	7	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	3
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
Modeling and Data Analysis	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3	2	
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4		
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	1	1
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4		
		C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply.	2, 3		

## High School (continued)

High School – Seeing Structure in Expressions/Polynomial Expressions (15 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	A	D. Interpret the structure of expressions.	1, 2	4	11
		E. Write expressions in equivalent forms to solve problems.	1, 2	2	
		F. Perform arithmetic operations on polynomials.	2	5	
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	1
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	1	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
3. Communicating Reasoning	Communicating Reasoning	C. State logical assumptions being used.	1, 2, 3	3	3
		F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
		A. Test propositions or conjectures with specific examples.	2, 3		
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
		G. At later grades, determine conditions under which an argument does and does not apply.			

## High School (continued)

High School – Geometry Congruence (12 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	0	0
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	Modeling and Data Analysis	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).			
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	0	
		D. Interpret results in the context of a situation.			
B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.		2, 3, 4			
E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.					
	C. State logical assumptions being used.	1, 2, 3			
	F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4			
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	12	12
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
G. At later grades, determine conditions under which an argument does and does not apply.					

## High School (continued)

High School – Geometry Measurement and Modeling (10 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	4	10
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	6	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning		Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.		2, 3
	B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.		2, 3, 4		
	C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply.		2, 3		

## High School (continued)

High School – Statistics and Probability (12 items)					
Claim	Content Category	Assessment Targets	DOK	Number of Items	Total Items per Reporting Category
1. Concepts and Procedures	SP	P. Summarize, represent, and interpret data on a single count or measurement variable.	2	6	6
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	3	6
		B. Select and use appropriate tools strategically.	1, 2, 3		
		C. Interpret results in the context of a situation.			
	D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).				
	Modeling and Data Analysis	A. Apply mathematics to solve problems arising in everyday life, society, and the workplace.	2, 3	3	
		D. Interpret results in the context of a situation.			
		B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.	2, 3, 4		
		E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.			
C. State logical assumptions being used.					
F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3				
G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4				
3. Communicating Reasoning	Communicating Reasoning	A. Test propositions or conjectures with specific examples.	2, 3	0	0
		D. Use the technique of breaking an argument into cases.			
		B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.	2, 3, 4		
		E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.			
		C. State logical assumptions being used.	2, 3		
		F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions.			
		G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)			

## High School (continued)

High School – Interim Assessment Block – Performance Task					
Claim	Content Category	Assessment Targets	DOK	Items per Claim	Total Items in PT
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	6
		B. Select and use appropriate tools strategically. C. Interpret results in the context of a situation. D. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		A. Apply mathematics to solve problems arising in everyday life, society, and the workplace. D. Interpret results in the context of a situation.	2, 3		
	Modeling and Data Analysis	B. Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. E. Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	2, 3, 4	3	
		C. State logical assumptions being used. F. Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flow charts, or formulas).	1, 2, 3		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4		
3. Communicating Reasoning		Communicating Reasoning	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.		2, 3
B. Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. E. Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.	2, 3, 4				
C. State logical assumptions being used. F. Base arguments on concrete referents such as objects, drawings, diagrams, and actions. G. At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)	2, 3				