Claim	Content Category	Assessment Targets	DOK	Items CAT	Items PT	Total Items
1. Concepts and Procedures	Priority Cluster	C. Understand the connections between proportional relationships, lines, and linear equations.	1, 2	6	0	15
		D. Analyze and solve linear equations and pairs of simultaneous linear equations.	1, 2			
		B. Work with radicals and integer exponents.	1, 2	6		
		E. Define, evaluate, and compare functions.	1, 2			
		G. Understand congruence and similarity using physical models, transparencies, or geometry software.	1, 2			
		F. Use functions to model relationships between quantities.	1, 2	3		
		H. Understand and apply the Pythagorean Theorem.	1, 2			
	Supporting Cluster	A. Know that there are numbers that are not rational, and approximate them by rational numbers.	1, 2	5	0	5
		I. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	1, 2			
		J. Investigate patterns of association in bivariate data.	1, 2			
2. Problem Solving 4. Modeling and Data Analysis	Problem Solving (drawn across content domains)	A. Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2, 3	1	1–2	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	1		

– DOK: Depth of Knowledge, consistent with the Smarter Balanced Content Specifications.
-- The CAT algorithm will be configured to ensure the following:
   For Claim 1, each student will receive at least 7 CAT items at DOK 2 or higher.
   For combined Claims 2 and 4, each student will receive at least 2 CAT items at DOK 3 or higher.
   For Claim 3, each student will receive at least 2 CAT items at DOK 3 or higher.

Target Sampling Mathematics Grade 8						
Claim	Content Category	Assessment Targets	DOK	Items CAT	Items PT	Total Items
2. Problem Solving 4. Modeling and Data Analysis	Modeling and Data Analysis (drawn across content domains)	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	2–3	5–6
		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	1		
		G. Identify, analyze, and synthesize relevant external resources to pose or solve problems.	3, 4	0		
3. Communicating Reasoning	Communicating Reasoning (drawn across content domains)	A. Test propositions or conjectures with specific examples. D. Use the technique of breaking an argument into cases.	2, 3	2–3	2	8
		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	1–2		
		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, 4	2–3		

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