Maryland
STATE DEPARTMENT OF EDUCATION

MCAP Grade 7 Mathematics

High Level Blueprint

This High-Level Blueprint describes the structure and content of the Maryland Comprehensive Assessment Program (MCAP) Grade 7 Mathematics Assessment by subclaim.

Content Subclaim

The MCAP Grade 7 assessment contains 23 operational items designed to elicit evidence to support the Content Subclaim. Content Subclaim items are worth 1-point, are machine scored, and align to the Grade 7 evidence statements. Refer to the MCAP Grade 7 Evidence Statement document for more information on the content evidence statements.

Domain: Ratios and Proportional Relationships **Number of items: 8**

Code	Cluster
7.RP.A	Analyze proportional relationships and use them to solve real-world and mathematical problems.

Domain: The Number System **Number of items: 4**

Code	Cluster
7.NS.A	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Domain: Equations and Expressions **Number of items: 5**

Code	Cluster
7.EE.A	Use properties of operations to generate equivalent expressions.
7.EE.B	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Domain: Geometry **Number of items: 3**

Code	Domain & Cluster
7.G.A	Draw, construct, and describe geometric figures and describe the relationships between them.
7.G.B	Solve real-world and mathematical problems involving angle measure, area, surface area, and volume.

Domain: Statistics and Probability **Number of items: 3**

Code	Domain & Cluster
7.SP.A	Use random sampling to draw inferences about a population.
7.SP.B	Draw informal comparative inferences about two populations.
7.SP.C	Investigate chance processes and develop, use, and evaluate probability models.

Total number of Operational Items: 23

Reasoning Subclaim

The MCAP Grade 7 assessment includes 6 operational items that elicit evidence to support the Reasoning Subclaim. Each assessment includes machine-scored and human-scored (constructed response) reasoning items. The content focus for all reasoning items is based on the content clusters. Refer to the MCAP Grade 7 Evidence Statements document for more information on the reasoning evidence statements.

Evidence Statements

7.R.1 Reasoning with Ratios and Proportional Relationships

7.R.2 Reasoning with Number Systems

7.R.3 Reasoning with Expressions and Equations

Number of Machine Scored Items – Four (4) 1-point items

Number of Constructed Response Items – One 3-point item and one 4-point item

Modeling Subclaim

The MCAP Grade 7 assessment includes 6 operational items that elicit evidence to support the Modeling Subclaim. Each assessment includes machine-scored and human-scored (constructed response) modeling items. Modeling items may address any of the Grade 7 evidence statements. Refer to the MCAP Grade 7 Evidence Statement document for more information on the modeling evidence statements.

Evidence Statements

7.M.1 Choose and produce appropriate mathematics to model quantities and mathematical relationships in order to analyze situations, make predictions, solve multi-step problems, and draw conclusions.

7. M.2 Given a real-world situation, identify the problem that needs to be solved, make necessary assumptions, and identify important information.

7.M.3 Given real-world situation, formulate a mathematical representation of the problem.

7.M.4 Given a real-world situation, use mathematical models to compute and draw conclusions.

7.M.5 Given a real-world situation, interpret what a solution means within the context of the situation.

7.M.6 Given a real-world situation, evaluate and/or validate a partial or complete solution.

Number of Machine Scored Items – Four (4) 1-point items

Number of Constructed Response Items – One 3-point item and one 4-point item