

This High-Level Blueprint describes the structure and content of the Maryland Comprehensive Assessment Program (MCAP) Grade 4 Mathematics Assessment by subclaim.

## Content Subclaim

The MCAP Grade 4 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 4 evidence statements. Refer to the MCAP Grade 4 Evidence Statement document for more information on the content evidence statements.

### Domain: Operations and Algebraic Thinking

Number of items: 4

Code	Cluster
4.OA.A	Use the four operations with whole numbers to solve problems.
4.OA.B	Gain familiarity with factors and multiples.
4.OA.C	Generate and analyze patterns. operations, and identify and explain patterns in arithmetic.

### Domain: Number and Operations in Base Ten

Number of items: 5

Code	Cluster
4.NBT.A	Generalize place value understandings for multi-digit whole numbers.
4.NBT.B	Use place value understanding and properties of operations to perform multi-digit arithmetic.

### Domain: Number and Operations - Fractions

Number of items: 10

Code	Cluster
4.NF.A	Extend understandings of fraction equivalence and ordering.
4.NF.B	Build fractions from unit fractions by applying and extending previous understanding of operations on whole numbers.
4.NF.C	Understand decimal notation for fractions, and compare decimals.

**Domain: Measurement****Number of items: 3**

Code	Cluster
4.MD.A	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
4.MD.B	Represent and interpret data.
4.MD.C	Geometric measurement: Understand concepts of angle and measure angles.

**Domain: Geometry****Number of items: 1**

Code	Cluster
4.G.A	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

**Total number of Operational Items: 23**

## Reasoning Subclaim

The MCAP Grade 4 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 4 Evidence Statements document for more information on the reasoning evidence statements.

**Evidence Statements**

- 4.R.1 Base reasoning or explanations using a given pictorial representation and explain how the pictorial model represents a mathematical concept, or how it can be used to justify or refute a statement (with or without flaws) or how it can be used to generalize.
- 4.R.2 Identify flawed thinking/reasoning and explain how to correct the thinking or work.
- 4.R.3 Prove or disprove a statement, conjecture or generalization, using correct and precise mathematical examples.
- 4.R.4 Reason mathematically to create a correct and precise solution to a real-world problem and be able to explain why the answer is mathematically correct.

**Number of Machine Scored Items – Four (4) 1-point items****Number of Constructed Response Items – Two (2) 3-point items**

## Modeling Subclaim

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The MCAP Grade 4 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 4 evidence statements. Refer to the MCAP Grade 4 Evidence Statement document for more information on the modeling evidence statements.

### Evidence Statements

- 4.M.1 Determine the problem that needs to be solved in a real-world situation.
- 4.M.2 Determine the information that is needed to solve a problem in a given real-world situation.
- 4.M.3 Identify the mathematics that is needed to create a solution path for a real-world situation.
- 4.M.4 Create a solution path that represents the mathematics needed to solve a real-world situation.
- 4.M.5 Evaluate a partial or complete solution to a real-world situation.

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

**Number of Constructed Response Items – Two (2) 3-point items**