Maryland MCAP Algebra 1
High Level Blueprint and Curriculum Crosswalk

Overview

Students in Montgomery County currently experience the following required assessments in order to monitor progress and learning:

- NWEA MAP Growth Math 6+: currently 2 administrations required annually (frequency TBD for SY 26)
- Curriculum-aligned assessments: currently administered quarterly (frequency TBD for SY 26)
- MCAP: administered annually

MCPS middle school curricular tools (Illustrative Math) ensure instruction and assessment opportunities of all grade level standards as per the alignment to the Maryland Algebra 1 Blueprint crosswalk shown below.

NWEA MAP (Math 6+)

This is a nationally normed assessment addressing four content domains that are similar to those taught in Maryland.

- This adaptive test provides information across grade levels for individual students and can be analyzed for growth.
- This adaptive test does not include opportunities as described in the MCAP rubrics for modeling and reasoning.

The MCPS OSA linking study for grades 3- 8 has provided overall achievement levels aligned to MCAP.

MCAP Blueprint

Content Subclaim

The MCAP Algebra I assessment contains 24 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 Algebra I evidence statements. Refer to the MCAP Algebra I Evidence Statement document for more information on the content evidence statements

Conceptual Category: Number and Quantity **Number of Items: 1**

Code	Domain and Cluster	HQIM - Illustrative Math
N.RN	The Real Number System B. Use properties of rational and irrational numbers	Unit 7 End-of-Unit Assessment
N.Q	Quantity A. Reason quantitatively and use units to solve problems	*Unit 2 cool downs* *Unit 5 cool downs*

Conceptual Category: Algebra **Number of Items: 12**

Code	Domain and Cluster	HQIM - Illustrative Math
A.SSE	Seeing Structure in Expressions A. Interpret the structure of expressions. B. Write expressions in equivalent form to solve problems	Unit 5 Mid- & End-of-Unit Assessment, Unit 6 Mid- & End-of-Unit Assessment, Unit 7 Mid- & End-of-Unit Assessment
A.APR	Arithmetic with Polynomials and Rational Expressions A. Perform arithmetic operations on polynomials B. Understand the relationship between zeros and factors of polynomials	*Unit 6 cool downs* *Unit 7 cool downs*
A.CED	Creating Equations A. Create equations that describe numbers or relationships	Unit 2 Mid- & End-of-Unit Assessment Unit 5 Mid-Unit Assessment Unit 7 End-of-Unit Assessment
A. REI	Reason with Equations and Inequalities A. Understand solving equations as a process of reasoning and explain the reasoning. B. Solve equations and inequalities in one variable. C. Solve systems of equations. D. Represent and solve equations and inequalities graphically.	Unit 2 Mid- & End-of-Unit Assessment Unit 4 Mid-Unit Assessment Unit 7 Mid- & End-of-Unit Assessment

Conceptual Category: Functions **Number of Items: 9**

Code	Domain and Cluster	HQIM - Illustrative Math
F.IF	Interpreting Functions A. Understand the concept of a function and use function notation. B. Interpret functions that arise in applications in terms of the context. C. Analyze functions using different representations.	Unit 4 Mid- & End-of-Unit Assessment Unit 5 Mid-& End-of-Unit Assessment Unit 6 Mid-& End-of-Unit Assessment
F.BF	Building Functions A. Build a function that models a relationship between two quantities. B. Build new functions from existing functions.	Unit 4 Mid- & End-of-Unit Assessment Unit 6 Mid-& End-of-Unit Assessment
F.LE	LInear, Quadratic, and Exponential Models A. Construct and compare linear, quadratic, exponential models & solve problems. B. Interpret expressions for functions in terms of the situation they model.	Unit 4 End-of-Unit Assessment Unit 5 Mid- & End-of-Unit Assessment

Conceptual Category: Statistics **Number of Items: 2**

Code	Domain and Cluster	HQIM - Illustrative Math
S.ID	Interpreting Categorical and Quantitative Data B. Summarize, represent, and interpret data on two categorical quantitative variables. C. Interpret linear models.	Unit 1 End-of-Unit Assessment Unit 3 End-of-Unit Assessment

Reasoning Subclaim

Code	Evidence Statement	Item Type
R.1	Given an equation reason about the number or nature of the solutions.	Machine Scored: Four 1-point items Constructed Response: Two 4-point item • 4 points: provides full and complete evidence of the modeling process used to solve a real-world problem • 3 points: provides evidence of the modeling process used to solve a real-world problem • 2 points: provides partial evidence of the modeling process used to solve a real-world problem • 1 point: provides limited evidence of the modeling process used to solve a real-world problem. • 0 point: response is completely incorrect, incoherent, or irrelevant.
R.2	Given a system of equations, reason about the number or nature of the solutions.	
R.3	Reasoning based on the principle that the graph of an equation and inequalities in two variables is the set of all its solutions plotted in the coordinate plane.	
R4.	Identify an option that would refute a conjecture/claim.	
R.5	Identify a correct method and justification given two or more chains of reasoning.	
R.6	Given a proposition, determine cases where the proposition is true or false.	
R.7	Identify an unstated assumption that would make a problem well-posed or make a particular method variable.	
R.8	Given an equation or system of equations, present the solution steps as a logical argument that concludes with the set of solutions (if any).	
R.9	Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures about functions.	
R.10	Express reasoning about transformations of functions.	
R.11	Express reasoning about linear and exponential growth.	

Modeling Subclaim

Code	Evidence Statement	Item Type
M.1	Choose between competing mathematical models to solve real-world problems.	Machine Scored: Four 1-point items Constructed Response: Two 4-point item ● 4 points: provides full and complete evidence of the modeling process used to solve a real-world problem ● 3 points: provides evidence of the modeling process used to solve a real-world problem ● 2 points: provides partial evidence of the modeling process used to solve a real-world problem ● 1 point: provides limited evidence of the modeling process used to solve a real-world problem. ● 0 point: response is completely incorrect, incoherent, or irrelevant.
M.2	Construct a mathematical model to solve a problem.	
M.3	Validate a given model and make improvements.	
M.4	Interpret the solution to a real-world problem in terms of context.	
M.5	Compare the result from a model with real world data.	
M.6	Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge.	
M.7	Identify information or assumptions needed to solve a problem.	
M8.	Provide a reasoned estimate of a quantity needed to solve a problem.	

Curriculum Overview

HQIM - Illustrative Math Unit	Assessment	Required (in PM)	Assessment Date	Standards Assessed
All Units (Units 1 - 8)	Cool Downs		Daily	Varied by Cool Down
1: One-Variable Statistics	End of Unit		Late May	S.ID.A.1, S.ID.A.2, S.ID.A.3
2: Linear Equations, Inequalities, and Systems	Mid-Unit		Late September	A.CED.A.2, A.REI.A.1, A.REI.B.3, A.REI.C.5, A.REI.C.6, A.REI.D.10
	End-of-Unit		Mid October	A.CED.A.1, A.CED.A.2, A.CED.A.3, A.REI.B.3, A.REI.D.12
3: Two-variable Statistics	End-of-Unit		Mid June	S.ID.B.5, S.ID.B.6.A, S.ID.B.6.B, S.ID.B.6.C, S.ID.C, S.ID.C.7, S.ID.C.8
4: Functions	Mid-Unit		Early November	A.REI.D.11, F.BF.A.1.A, F.IF.A.2, F.IF.B.4, F.IF.B.6
	End-of-Unit		Early December	F.BF.A.1.A, F.BF.B.3, F.BF.B.4.A, F.IF.A.2, F.IF.B.5, F.IF.C.7.B
5: Introduction to Exponential Functions	Mid-Unit		Early November	A.CED.A.2, A.SSE.A.1.B, F.IF.B, F.IF.C.7, F.LE.A.1, F.LE.A.2, F.LE.B.5
	End-of-Unit		End of January	A.SSE.A.1, A.SSE.A.2.A, A.SSE.A.2.B, F.IF.C.8.B, F.LE.A.1, F.LE.A.3, F.LE.B.5
6: Introduction to Quadratic Functions	Mid-Unit		Mid February	A.SSE.A.2, F.BF.A.1.A, F.IF.B.4, F.IF.B.6, F.IF.C, F.IF.C.7.A, F.LE.A, F.LE.A.3
	End-of-Unit		Early March	A.SSE.A.2, A.SSE.B.3, F.BF.B.3, F.IF.B.4, F.IF.B.5, F.IF.C.7, F.IF.C.7.A, F.IF.C.8, F.IF.C.9
7: Quadratic Equations	Mid-Unit		Late March	A.REI.A.1, A.REI.B.4.B, A.REI.D, A.REI.D.10, A.SSE.A.1, A.SSE.A.2
	End-of-Unit		Early May	A.CED.A.1, A.REI.B.4, A.REI.B.4.A, A.REI.B.4.B, A.SSE.A.2, A.SSE.B.3.C, N.RN.B.3

* The required assessments are the district assessments for each marking period

ADDITIONAL RESOURCES

Pacing Guidance for Algebra 1

MCAP Algebra I Evidence Statement

Middle School Assessment Timeline

High School Assessment Timeline