

Georgia Milestones Assessment System

Mathematics Grade 3

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

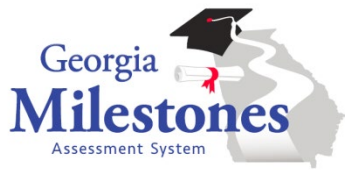
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		14
Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000.	3.NR.1	6
Represent fractions with denominators of 2, 3, 4, 6 and 8 in multiple ways within a framework using visual models.	3.NR.4	8
Patterning & Algebraic Reasoning		20
Use part-whole strategies to represent and solve real-life problems involving addition and subtraction with whole numbers up to 10,000.	3.PAR.2	6
Use part-whole strategies to solve real-life, mathematical problems involving multiplication and division with whole numbers within 100.	3.PAR.3	14
Measurement & Data Reasoning		10
Solve real-life, mathematical problems involving length, liquid volume, mass, and time and analyze graphical displays of data to answer relevant questions.	3.MDR.5	10
Geometric & Spatial Reasoning		14
Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry.	3.GSR.6	6
Identify area as a measurable attribute of rectangles and determine the area of a rectangle presented in real-life, mathematical problems.	3.GSR.7	8
Determine the perimeter of a polygon presented in real-life, mathematical problems.	3.GSR.8	
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 3 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	15 to 20	25% to 35%
Level 2	26 to 32	45% to 55%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 3

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

¹ **Technology-Enhanced:** Possible variants of the technology-enhanced item types for Math include graphing, drag-and-drop, drop-down, and keypad input.

² **1-point Selected-Response and Technology-Enhanced Items:** The ratio of selected-response to technology-enhanced items may vary. The target range of 1-point technology-enhanced items is 0 to 5.

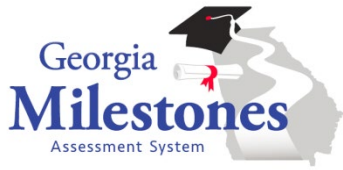
³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items.

⁴ **Total:** Of the 55 items, 50 contribute to the student's Mathematics score.

Mathematical Practices

Mathematical practices describe how students should engage with the mathematics content for their grade level. Developing these habits of mind builds students' capacity to become mathematical thinkers. These practices are embedded within items aligned to the mathematics content standards, but not reported as a separate reporting category.

Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	3.MP.1
Reason abstractly and quantitatively.	3.MP.2
Construct viable arguments and critique the reasoning of others.	3.MP.3
Model with mathematics.	3.MP.4
Use appropriate tools strategically.	3.MP.5
Attend to precision.	3.MP.6
Look for and make use of structure.	3.MP.7
Look for and express regularity in repeated reasoning.	3.MP.8



Georgia Milestones Assessment System

Mathematics Grade 4

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

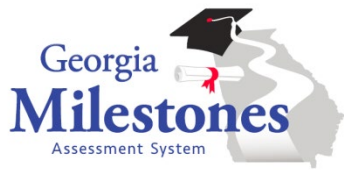
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		30
Recognize patterns within the base ten place value system with quantities presented in real-life situations to compare and round multi-digit whole numbers through the hundred-thousands place.	4.NR.1	7
Using part-whole strategies, solve problems involving addition and subtraction through the hundred-thousands place, as well as multiplication and division of multi-digit whole numbers presented in real-life, mathematical situations.	4.NR.2	8
Solve real-life problems involving addition, subtraction, equivalence, and comparison of fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100 using part-whole strategies and visual models.	4.NR.4	8
Solve real-life problems involving addition, equivalence, comparison of fractions with denominators of 10 and 100, and comparison of decimal numbers as tenths and hundredths using part-whole strategies and visual models.	4.NR.5	7
Patterning & Algebraic Reasoning		7
Generate and analyze patterns, including those involving shapes, input/output diagrams, factors, multiples, prime numbers, and composite numbers.	4.PAR.3	7
Measurement & Data Reasoning		8
Measure time and objects that exist in the world to solve real-life, mathematical problems and analyze graphical displays of data to answer relevant questions.	4.MDR.6	8
Geometric & Spatial Reasoning		13
Investigate the concepts of angles and angle measurement to estimate and measure angles.	4.GSR.7	6
Identify and draw geometric objects, classify polygons based on properties, and solve problems involving area and perimeter of rectangular figures.	4.GSR.8	7
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 4 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	17 to 23	30% to 40%
Level 2	23 to 29	40% to 50%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 4

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

¹ **Technology-Enhanced:** Possible variants of the technology-enhanced item types for Math include graphing, drag-and-drop, drop-down, and keypad input.

² **1-point Selected-Response and Technology-Enhanced Items:** The ratio of selected-response to technology-enhanced items may vary. The target range of 1-point technology-enhanced items is 0 to 5.

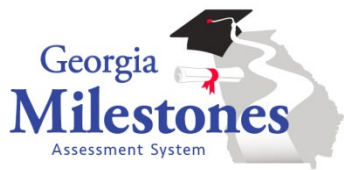
³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items.

⁴ **Total:** Of the 55 items, 50 contribute to the student's Mathematics score.

Mathematical Practices

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Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	4.MP.1
Reason abstractly and quantitatively.	4.MP.2
Construct viable arguments and critique the reasoning of others.	4.MP.3
Model with mathematics.	4.MP.4
Use appropriate tools strategically.	4.MP.5
Attend to precision.	4.MP.6
Look for and make use of structure.	4.MP.7
Look for and express regularity in repeated reasoning.	4.MP.8



Georgia Milestones Assessment System

Mathematics Grade 5

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

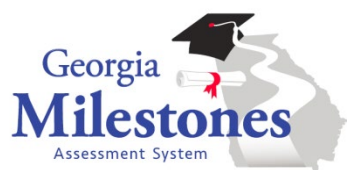
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		38
Use place value understanding to solve real-life, mathematical problems.	5.NR.1	14
Read, write, and compare decimal numbers to the thousandths place, and round and perform operations with decimal numbers to the hundredths place to solve real-life, mathematical problems.	5.NR.4	
Describe fractions and perform operations with fractions to solve relevant, mathematical problems using part-whole strategies and visual models.	5.NR.3	14
Multiply and divide multi-digit whole numbers to solve relevant, mathematical problems.	5.NR.2	10
Write, interpret, and evaluate numerical expressions within authentic problems.	5.NR.5	
Patterning & Algebraic Reasoning		6
Solve relevant problems by creating and analyzing numerical patterns using the given rule(s).	5.PAR.6	6
Measurement & Data Reasoning		7
Solve problems involving customary measurements, metric measurements, and time and analyze graphical displays of data to answer relevant questions.	5.MDR.7	7
Geometric & Spatial Reasoning		7
Examine properties of polygons and rectangular prisms, classify polygons by their properties, and discover volume of right rectangular prisms.	5.GSR.8	7
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 5 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	17 to 23	30% to 40%
Level 2	23 to 29	40% to 50%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 5 ASSESSMENT BLUEPRINT EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

¹ **Technology-Enhanced:** Possible variants of the technology-enhanced item types for Math include graphing, drag-and-drop, drop-down, and keypad input.

² **1-point Selected-Response and Technology-Enhanced Items:** The ratio of selected-response to technology-enhanced items may vary. The target range of 1-point technology-enhanced items is 0 to 5.

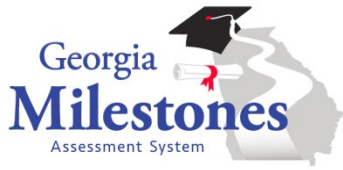
³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items. Field test items are not included on the EOG Retest.

⁴ **Total:** Of the 55 items, 50 contribute to the student's Mathematics score. The EOG Retest includes only 50 items, all of which contribute to the student's Mathematics score.

Mathematical Practices

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Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	5.MP.1
Reason abstractly and quantitatively.	5.MP.2
Construct viable arguments and critique the reasoning of others.	5.MP.3
Model with mathematics.	5.MP.4
Use appropriate tools strategically.	5.MP.5
Attend to precision.	5.MP.6
Look for and make use of structure.	5.MP.7
Look for and express regularity in repeated reasoning.	5.MP.8



Georgia Milestones Assessment System

Mathematics Grade 6

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

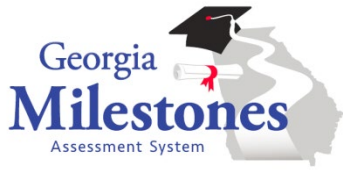
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		29
Solve relevant, mathematical problems involving operations with whole numbers, fractions, and decimal numbers.	6.NR.1	6
Apply operations with whole numbers, fractions, and decimals within relevant applications.	6.NR.2	8
Solve a variety of problems involving whole numbers and their opposites; model rational numbers on a number line to describe problems presented in relevant, mathematical situations.	6.NR.3	7
Solve a variety of contextual problems involving ratios, unit rates, equivalent ratios, percentages, and conversions within measurement systems using proportional reasoning.	6.NR.4	8
Geometric & Spatial Reasoning		7
Solve relevant problems involving area, surface area, and volume.	6.GSR.5	7
Patterning & Algebraic Reasoning		22
Identify, write, evaluate, and interpret numerical and algebraic expressions as mathematical models to explain authentic situations.	6.PAR.6	8
Write and solve one-step equations and inequalities as mathematical models to explain authentic, realistic situations.	6.PAR.7	7
Graph rational numbers as points on the coordinate plane to represent and solve contextual, mathematical problems; draw polygons using the coordinates for their vertices and find the length of a side of a polygon.	6.PAR.8	7
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 6 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	15 to 20	25% to 35%
Level 2	26 to 32	45% to 55%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 6

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

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² **1-point Selected-Response and Technology-Enhanced Items:** The ratio of selected-response to technology-enhanced items may vary. The target range of 1-point technology-enhanced items is 0 to 5.

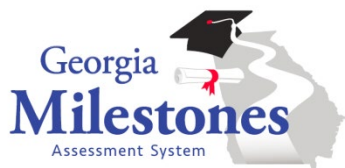
³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items.

⁴ **Total:** Of the 55 items, 50 contribute to the student's Mathematics score.

Mathematical Practices

Mathematical practices describe how students should engage with the mathematics content for their grade level. Developing these habits of mind builds students' capacity to become mathematical thinkers. These practices are embedded within items aligned to the mathematics content standards, but not reported as a separate reporting category.

Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	6.MP.1
Reason abstractly and quantitatively.	6.MP.2
Construct viable arguments and critique the reasoning of others.	6.MP.3
Model with mathematics.	6.MP.4
Use appropriate tools strategically.	6.MP.5
Attend to precision.	6.MP.6
Look for and make use of structure.	6.MP.7
Look for and express regularity in repeated reasoning.	6.MP.8



Georgia Milestones Assessment System

Mathematics Grade 7

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

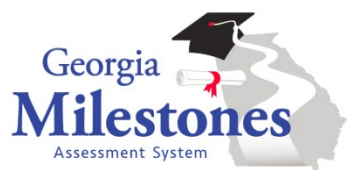
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		12
Solve relevant, mathematical problems, including multi-step problems, involving the four operations with rational numbers and quantities in any form (integers, percentages, fractions, and decimal numbers).	7.NR.1	12
Patterning & Algebraic Reasoning		28
Use properties of operations, generate equivalent expressions and interpret the expressions to explain relevant situations.	7.PAR.2	12
Represent authentic situations using equations and inequalities with variables; solve equations and inequalities symbolically, using the properties of equality.	7.PAR.3	
Recognize proportional relationships in relevant, mathematical problems; represent, solve, and explain these relationships with tables, graphs, and equations.	7.PAR.4	16
Geometric & Spatial Reasoning		9
Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms.	7.GSR.5	9
Probability Reasoning		9
Using mathematical reasoning, investigate chance processes and develop, evaluate, and use probability models to find probabilities of simple events presented in authentic situations.	7.PR.6	9
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 7 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	6 to 12	10% to 20%
Level 2	35 to 41	60% to 70%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 7

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

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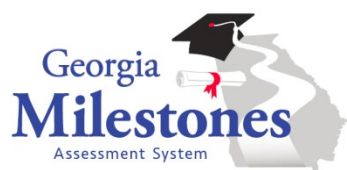
³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items.

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Mathematical Practices

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Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	7.MP.1
Reason abstractly and quantitatively.	7.MP.2
Construct viable arguments and critique the reasoning of others.	7.MP.3
Model with mathematics.	7.MP.4
Use appropriate tools strategically.	7.MP.5
Attend to precision.	7.MP.6
Look for and make use of structure.	7.MP.7
Look for and express regularity in repeated reasoning.	7.MP.8



Georgia Milestones Assessment System

Mathematics Grade 8

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

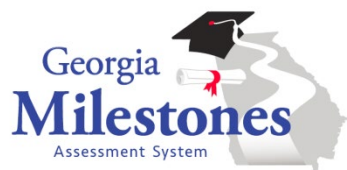
Claims, Targets, and Content Standards

Claims and Targets	Content Standards Assessed	Approximate # of Points
Numerical Reasoning		11
Solve problems involving irrational numbers and rational approximations of irrational numbers to explain realistic applications.	8.NR.1	11
Solve problems involving radicals and integer exponents including relevant application situations; apply place value understanding with scientific notation and use scientific notation to explain real phenomena.	8.NR.2	
Patterning & Algebraic Reasoning		16
Create and interpret expressions within relevant situations. Create, interpret, and solve linear equations and linear inequalities in one variable to model and explain real phenomena.	8.PAR.3	10
Show and explain the connections between proportional and non-proportional relationships, lines, and linear equations; create and interpret graphical mathematical models and use the graphical, mathematical model to explain real phenomena represented in the graph.	8.PAR.4	6
Functional & Graphical Reasoning		23
Describe the properties of functions to define, evaluate, and compare relationships, and use functions and graphs of functions to model and explain real phenomena.	8.FGR.5	10
Solve practical, linear problems involving situations using bivariate quantitative data.	8.FGR.6	6
Justify and use various strategies to solve systems of linear equations to model and explain realistic phenomena.	8.FGR.7	7
Geometric & Spatial Reasoning		8
Solve contextual, geometric problems involving the Pythagorean Theorem and the volume of geometric figures to explain real phenomena.	8.GSR.8	8
Total		58

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the Grade 8 Mathematics exam.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	12 to 17	20% to 30%
Level 2	29 to 35	50% to 60%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Mathematics Grade 8

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1,2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

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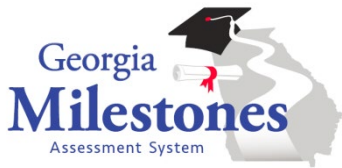
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Mathematical Practices

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Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	8.MP.1
Reason abstractly and quantitatively.	8.MP.2
Construct viable arguments and critique the reasoning of others.	8.MP.3
Model with mathematics.	8.MP.4
Use appropriate tools strategically.	8.MP.5
Attend to precision.	8.MP.6
Look for and make use of structure.	8.MP.7
Look for and express regularity in repeated reasoning.	8.MP.8



Georgia Milestones Assessment System

Algebra: Concepts & Connections

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Claims, Targets, and Content Standards

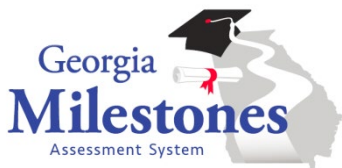
Claims and Targets	Content Standards Assessed	Approximate # of Points
Geometric & Spatial Reasoning		6
Solve problems involving distance, midpoint, slope, area, and perimeter to model and explain real-life phenomena.	A.GSR.3 ⁺	6
Numerical Reasoning		6
Investigate rational and irrational numbers and rewrite expressions involving square roots and cube roots.	A.NR.5 ⁺	6
Patterning & Algebraic Reasoning		19
Create, analyze, and solve linear inequalities in two variables and systems of linear inequalities to model real-life phenomena.	A.PAR.4 ⁺	7
Build quadratic expressions and equations to represent and model real-life phenomena; solve quadratic equations in mathematically applicable situations.	A.PAR.6 ⁺	6
Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.	A.PAR.8 ⁺	6
Functional & Graphical Reasoning		21
Construct and interpret arithmetic sequences as functions, algebraically and graphically, to model and explain real-life phenomena. Use formal notation to represent linear functions and the key characteristics of graphs of linear functions, and informally compare linear and non-linear functions using parent graphs.	A.FGR.2 ⁺	7
Construct and interpret quadratic functions from data points to model and explain real-life phenomena; describe key characteristics of the graph of a quadratic function to explain a mathematically applicable situation for which the graph serves as a model.	A.FGR.7 ⁺	7
Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.	A.FGR.9 ⁺	7
Data & Statistical Reasoning		6
Collect, analyze, and interpret univariate quantitative data to answer statistical investigative questions that compare groups to solve real-life problems; Represent bivariate data on a scatter plot and fit a function to the data to answer statistical questions and solve real-life problems.	A.DSR.10 ⁺	6
Total		58

⁺ Standard A.MM.1 will be assessed in collaboration with all other content standards. A.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Depth of Knowledge

Depth of Knowledge (DOK) is measured on a scale of 1 to 4 and refers to the level of cognitive demand (different kinds of thinking) required to complete an assessment item. The following table shows the expectations of the four DOK levels on the End-of-Course Algebra: Concepts and Connections assessment.

Depth of Knowledge	Approximate # of Points	Approximate % of Test
Level 1	15 to 20	25% to 35%
Level 2	26 to 32	45% to 55%
Level 3	9 to 15	15% to 25%
Level 4	N/A	N/A



Georgia Milestones Assessment System

Algebra: Concepts & Connections

ASSESSMENT BLUEPRINT

EFFECTIVE 2023-2024 SCHOOL YEAR

Assessment Design

Item Type	# of Items	# of Points
1-point Selected-Response and Technology-Enhanced ^{1, 2}	42	42
2-point Technology-Enhanced ¹	8	16
Field Test Items ³	5	0
Total⁴	55	58

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³ **Field Test Items:** Field Test items may include 1-point selected response, 1-point technology-enhanced, and 2-point technology enhanced items.

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Mathematical Practice	Standard
Make sense of problems and persevere in solving them.	A.MP.1
Reason abstractly and quantitatively.	A.MP.2
Construct viable arguments and critique the reasoning of others.	A.MP.3
Model with mathematics.	A.MP.4
Use appropriate tools strategically.	A.MP.5
Attend to precision.	A.MP.6
Look for and make use of structure.	A.MP.7
Look for and express regularity in repeated reasoning.	A.MP.8

Mathematical Modeling

Mathematical modeling describes how students should apply mathematics to real-life situations and model real-life phenomena using mathematics. Mathematical modeling is embedded within items aligned to the mathematics content standards, but not reported as a separate reporting category.

Mathematical Modeling	Standard
Explain applicable, mathematical problems using a mathematical model.	A.MM.1.1
Create mathematical models to explain phenomena that exist in the natural sciences, social sciences, liberal arts, fine and performing arts, and/or humanities domains.	A.MM.1.2
Use units of measure (linear, area, capacity, rates, and time) as a way to make sense of conceptual problems; identify, use, and record appropriate units of measure within the given framework, within data displays, and on graphs; convert units and rates using proportional reasoning given a conversion factor; use units within multi-step problems and formulas; interpret units of input and resulting units of output.	A.MM.1.3
Use various mathematical representations and structures with this information to represent and solve real-life problems.	A.MM.1.4
Define appropriate quantities for the purpose of descriptive modeling.	A.MM.1.5