

2024 Forward Exam Mathematics Blueprints Grades 3-8

Mathematics Blueprint Grade 3

Domain and Cluster Statements	Focus	Possible Points
Operations and Algebraic Thinking (Reporting Category)		13-15
A. Represent and solve problems involving multiplication and division.	M	
B. Understand properties of multiplication and the relationship between multiplication and division.	M	
C. Multiply and divide within 100.	M	
D. Solve problems involving the four operations and identify and explain patterns in arithmetic.	M	
Number and Operation in Base Ten (Reporting Category)		4-6
A. Use place value understanding and properties of operations to perform multi-digit arithmetic, using a variety of strategies.	A	
Number and Operation – Fractions (Reporting Category)		8-10
A. Develop understanding of fractions as numbers.	M	
Measurement and Data (Reporting Category)		10-12
A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	M	
B. Represent and interpret data.	S	
C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	M	
D. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	A	
Geometry (Reporting Category)		4-6
A. Reason with shapes and their attributes.	S	
Total Points		44

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grades 3-5 the major focus is on concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions.

Mathematics Blueprint Grade 4

Domain and Cluster Statements	Focus	Possible Points
Operations and Algebraic Thinking (Reporting Category)		10-12
A. Use the four operations with whole numbers to solve problems.	M	
B. Gain familiarity with factors and multiples.	S	
C. Generate and analyze patterns.	A	
D. Multiply and divide within 100.	M	
Number and Operation in Base Ten (Reporting Category)		10-12
A. Generalize place value understanding for multi-digit whole numbers.	M	
B. Use place value understanding and properties of operations to perform multi-digit arithmetic.	M	
Number and Operation – Fractions (Reporting Category)		13-15
A. Extend understanding of fraction equivalence.	M	
B. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	M	
C. Understand decimal notation for fractions and compare decimal fractions.	M	
Measurement and Data (Reporting Category)		6-8
A. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	S	
B. Represent and interpret data.	S	
C. Geometric measurement: understand concepts of angle and measure angles.	A	
Geometry (Reporting Category)		4-6
A. Draw and identify lines and angles; classify shapes by properties of their lines and angles.	A	
Total Points		48

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grades 3-5 the major focus is on concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions.

Mathematics Blueprint Grade 5

Domain and Cluster Statements	Focus	Possible Points
Operations and Algebraic Thinking (Reporting Category)		4-6
A. Write and interpret numerical expressions.	A	
B. Analyze patterns and relationships.	A	
Number and Operation in Base Ten (Reporting Category)		13-15
A. Understand the place value system.	M	
B. Perform operations with multi-digit whole numbers and with decimals to hundredths.	M	
Number and Operation – Fractions (Reporting Category)		13-15
A. Use equivalent fractions as a strategy to add and subtract fractions.	M	
B. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	M	
Measurement and Data (Reporting Category)		9-11
A. Convert like measurement units within a given measurement system.	S	
B. Represent and interpret data.	S	
C. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	M	
Geometry (Reporting Category)		4-6
A. Graph points on the coordinate plane to solve real-world and mathematical problems.	A	
B. Classify two-dimensional figures into categories based on their properties.	A	
Total Points		48

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grades 3-5 the major focus is on concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions.

Mathematics Blueprint Grade 6

Domain and Cluster Statements	Focus	Possible Points
Ratios and Proportional Relationships (Reporting Category)		10-12
A. Understand ratio concept and use ratio reasoning to solve problems.	M	
The Number System (Reporting Category)		11-13
A. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	M	
B. Flexibly and efficiently compute with multi-digit numbers and find common factors and multiples.	A	
C. Apply and extend previous understandings of numbers to the system of rational numbers.	M	
Expressions and Equations (Reporting Category)		13-15
A. Apply and extend previous understandings of arithmetic to algebraic expressions.	M	
B. Reason about and solve one-variable equations and inequalities.	M	
C. Represent and analyze quantitative relationships between dependent and independent variables.	M	
Geometry (Reporting Category)		5-7
A. Solve real-world and mathematical problems involving area, surface area, and volume.	S	
Statistics and Probability (Reporting Category)		4-6
A. Develop understanding of statistical variability.	A	
B. Summarize and describe distributions.	A	
Total Points		48

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grade 6 the major focus is on ratios and proportional relationships, and early algebraic expressions and equations.

Mathematics Blueprint Grade 7

Domain and Cluster Statements	Focus	Possible Points
Ratios and Proportional Relationships (Reporting Category)		10-12
A. Analyze proportional relationships and use them to solve real-world and mathematical problems.	M	
The Number System (Reporting Category)		10-12
A. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	M	
Expressions and Equations (Reporting Category)		10-12
A. Use properties of operations to generate equivalent expressions.	M	
B. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	M	
Geometry (Reporting Category)		6-8
A. Draw, construct, and describe geometrical figures and describe the relationships between them.	A	
B. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	A	
Statistics and Probability (Reporting Category)		7-9
A. Use random sampling to draw inferences about a population.	S	
B. Draw informal comparative inferences about two populations.	A	
C. Investigate chance processes and develop, use, and evaluate probability models.	S	
Total Points		48

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grade 7 the major focus is on ratios and proportional relationships, and arithmetic of rational numbers.

Mathematics Blueprint Grade 8

Domain and Cluster Statements	Focus	Possible Points
The Number System (Reporting Category)		4-6
A. Know that there are numbers that are not rational and approximate them by rational numbers.	S	
Expressions and Equations (Reporting Category)		13-15
A. Work with radicals and integer exponents.	M	
B. Understand the connections between proportional relationships, lines, and linear equations.	M	
C. Analyze and solve linear equations and pairs of simultaneous linear equations.	M	
Functions (Reporting Category)		10-12
A. Define, evaluate, and compare functions.	M	
B. Use functions to model relationships between quantities.	M	
Geometry (Reporting Category)		10-12
A. Understand congruence and similarity using physical models, transparencies, or geometry software.	M	
B. Understand and apply the Pythagorean Theorem.	M	
C. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	A	
Statistics and Probability (Reporting Category)		6-8
A. Investigate patterns of association in bivariate data.	S	
Total Points		48

For information about the individual standards within each reporting category see the [Wisconsin Standards for Mathematics \(2021\)](#).

The number of points in each reporting category reflects a focus on the major work of each grade (M=Major work; S=Supporting work; A=Additional work) as described in Shift #3 from the *Wisconsin Standards for Mathematics*.

In grade 8 the major focus is on linear algebra and linear functions.

