

Knowre Math: **Grade 4** Curriculum

Chapter 1 Whole Numbers

Lesson	Topic	GA Standards of Excellence
1-1 Place Value	A) Place Values to Millions	MGSE4.NBT.1, MGSE4.NBT.2
	B) Expanded and Standard Form of Numbers	
1-2 Reading and Writing Numbers	A) Reading and Writing Numbers to Millions	MGSE4.NBT.2
1-3 Comparing and Ordering	A) Comparing Numbers with Six or Fewer Digits	MGSE4.NBT.2
	B) Ordering Whole Numbers	
1-4 Rounding	A) Rounding to a Given Place Value	MGSE4.NBT.3
	B) Rounding to a Lead Digit	

Chapter 2 Adding and Subtracting Whole Numbers

Lesson	Topic	GA Standards of Excellence
2-1 Adding	A) Vertical Addition of Two Numbers with Six or Fewer Digits	MGSE4.OA.3, MGSE4.NBT.4
	B) Vertical Addition of Three or More Numbers	
2-2 Subtracting	A) Vertical Subtraction of Numbers with Six or Fewer Digits	MGSE4.OA.3, MGSE4.NBT.4
2-3 Horizontal Addition and Subtraction	A) Horizontal Addition of Two Numbers	MGSE4.OA.3, MGSE4.NBT.4
	B) Horizontal Subtraction of Two Numbers	
2-4 Addition and Subtraction Relations	A) Relationships Between Addition and Subtraction Sentences	MGSE4.NBT.4
	B) Missing Numbers in Addition and Subtraction Sentences	
2-5 Mixed Operations and Estimating	A) Horizontal Addition and Subtraction of Three or More Numbers	MGSE4.OA.3, MGSE4.NBT.4
	B) Estimating Sums and Differences	

Knowre Math: **Grade 4** Curriculum

Chapter 3 Multiplying Whole Numbers

Lesson	Topic	GA Standards of Excellence
3-1 Basic Multiplication Facts	A) Single Digit Multiplication	MGSE4.OA.1.a, MGSE4.OA.1.b, MGSE4.OA.2, MGSE4.OA.3
3-2 Products with Multiples of 10	A) Multiplying a One-Digit Number and Ten	MGSE4.OA.1.a, MGSE4.OA.1.b, MGSE4.OA.2, MGSE4.OA.3, MGSE4.NBT.1, MGSE4.NBT.5
	B) Pattern of Zeros - Multiplication	
3-3 Multiply by One-Digit Numbers - Models	A) Base Ten Blocks to Multiply by One-Digit Numbers	MGSE4.OA.3MG MGSE4.NBT.5
	B) Tables to Multiply by One-Digit Numbers	
	C) Partial Products to Multiply by One-Digit Numbers	
3-4 Multiply by One-Digit Numbers - Standard Algorithm	A) Standard Algorithm to Multiply by One-Digit Numbers without Regrouping	MGSE4.OA.3, MGSE4.NBT.5
	B) Standard Algorithm to Multiply by One-Digit Numbers with Regrouping	
3-5 Multiply Two-Digit Numbers	A) Tables to Multiply Two-Digit Numbers	MGSE4.OA.3, MGSE4.NBT.5
	B) Partial Products to Multiply Two-Digit Numbers	
	C) Standard Algorithm to Multiply Two-Digit Numbers without Regrouping	
	D) Standard Algorithm to Multiply Two-Digit Numbers with Regrouping	
3-6 Horizontal Multiplication	A) Horizontal Multiplication of One-Digit Numbers	MGSE4.OA.3, MGSE4.NBT.5
	B) Horizontal Multiplication of Two-Digit Numbers	
	C) Estimating Products	

Knowre Math: **Grade 4** Curriculum

Chapter 4 Dividing Whole Numbers

Lesson	Topic	GA Standards of Excellence
4-1 Basic Division Facts	A) One-Digit Quotients When Dividing by One-Digit Numbers	MGSE4.OA.3
4-2 Quotients with Multiples of Ten	A) One Digit Quotients When Dividing by Ten	MGSE4.OA.3, MGSE4.NBT.1
	B) Pattern of Zeros - Division	
4-3 Divide with Partial Quotients - No Remainders	A) Base Ten Blocks to Divide by One-Digit Numbers	MGSE4.OA.3, MGSE4.NBT.6
	B) Partial Products to Divide by One-Digit Numbers	
4-4 Divide with the Standard Algorithm - No Remainders	A) Long Division to Divide by One-Digit Numbers	MGSE4.OA.3, MGSE4.NBT.6
4-5 Divide with Partial Quotients - Remainders	A) Base Ten Blocks to Divide by One-Digit Numbers with Remainders	MGSE4.OA.3, MGSE4.NBT.6
	B) Partial Products to Divide by One-Digit Numbers with Remainders	
4-6 Divide with the Standard Algorithm - Remainders	A) Long Division to Divide by One-Digit Numbers with Remainders	MGSE4.OA.3, MGSE4.NBT.6
4-7 Horizontal Division	A) Horizontal Division by One-Digit Numbers	MGSE4.OA.3, MGSE4.NBT.6
	B) Estimating Quotients	

Knowre Math: **Grade 4** Curriculum

Chapter 5 Operations and Patterns

Lesson	Topic	GA Standards of Excellence
5-1 Multiplication and Division Relations	A) Relationships Between Multiplication and Division Sentences	MGSE3.OA.6
	B) Missing Numbers in Multiplication and Division Sentences	
5-2 Mixed Operations	A) Horizontal Multiplication and Division of Three or More Numbers	MGSE4.OA.3
	B) Order of Operations to Evaluate Expressions without Grouping Symbols	
5-3 Expressions and Equations	A) Addition and Subtraction Expressions	MGSE4.OA.3
	B) Multiplication and Division Expressions	
	C) Expressions with More Than One Operation	
	D) Number Sentences	
5-4 Patterns	A) Repeating Patterns	MGSE4.OA.5
	B) Patterns and Rules	
	C) Continuing and Completing Patterns	

Knowre Math: **Grade 4** Curriculum

Chapter 6 Fraction Concepts

Lesson	Topic	GA Standards of Excellence
6-1 Divisibility and Multiples	A) Divisibility by 2, 3, 5, and 10	MGSE4.OA.4, MGSE4.OA.4
	B) Multiples	
6-2 Factors	A) Factors	MGSE4.OA.4, MGSE4.OA.4
	B) Prime and Composite Numbers	
6-3 Fraction Introduction	A) Modeling Fractions with Fraction Bars	MGSE3.NF.1, MGSE3.NF.2.a, MGSE3.NF.2.b
	B) Modeling Fractions on Number Lines	
6-4 Equivalent Fraction Models	A) Models to Write Equivalent Fractions	MGSE4.NF.1
	B) Models to Simplify Fractions	
	C) Models to Identify Equivalent Fractions	
6-5 Equivalent Fractions	A) Writing Equivalent Fractions	MGSE4.NF.1
	B) Simplifying Fractions	
6-6 Comparing and Ordering Fractions	A) Comparing Fractions with the Same Denominator	MGSE4.NF.2
	B) Comparing Fractions with the Same Numerator	
	C) Comparing Fractions with Different Numerators and Denominators	
	D) Ordering Fractions	

Knowre Math: **Grade 4** Curriculum

Chapter 7 Fraction Addition and Subtraction

Lesson	Topic	GA Standards of Excellence
7-1 Fraction Decomposition	A) Models to Decompose Fractions	MGSE4.NF.3.a, MGSE4.NF.3.b
	B) Decomposition of Fractions	
7-2 Add Fractions without Regrouping	A) Models to Add Fractions with Like Denominators - No Regrouping	MGSE4.NF.3.a, MGSE4.NF.3.c, MGSE4.NF.3.d
	B) Adding Fractions with Like Denominators - No Regrouping	
	C) Vertical Addition with Mixed Numbers - No Regrouping	
	D) Horizontal Addition with Mixed Numbers - No Regrouping	
7-3 Add Fractions with Regrouping	A) Models to Write Improper Fractions as Mixed Numbers	MGSE4.NF.3.a, MGSE4.NF.3.c, MGSE4.NF.3.d
	B) Models to Add Fractions with Like Denominators - Regrouping	
	C) Decomposition to Write Improper Fractions as Mixed Numbers	
	D) Adding Fractions with Like Denominators - Regrouping	
	E) Vertical Addition with Mixed Numbers - Regrouping	
	F) Horizontal Addition with Mixed Numbers - Regrouping	
7-4 Subtract Fractions without Regrouping	A) Models to Subtract Fractions with Like Denominators	MGSE4.NF.3.a, MGSE4.NF.3.c, MGSE4.NF.3.d
	B) Subtracting Fractions with Like Denominators	
	C) Vertical Subtraction with Mixed Numbers - No Regrouping	
	D) Horizontal Subtraction with Mixed Numbers - No Regrouping	

Knowre Math: **Grade 4** Curriculum

Chapter 7 Fraction Addition and Subtraction (cont..)

Lesson	Topic	GA Standards of Excellence
7-5 Subtract Fractions with Regrouping	A) Regrouping to Rewrite Whole and Mixed Numbers	MGSE4.NF.3.c, MGSE4.NF.3.d
	B) Vertical Subtraction with Mixed Numbers - Regrouping	
	C) Horizontal Subtraction with Mixed Numbers - Regrouping	
7-6 Add and Subtract Fractions - Denominators 10 and 100	A) Models of Equivalent Fractions with Denominators of 10 and 100	MGSE4.NF.5
	B) Models to Add Fractions with Unlike Denominators	
	C) Models to Subtract Fractions with Unlike Denominators	

Chapter 8 Multiplying Fractions

Lesson	Topic	GA Standards of Excellence
8-1 Multiplying Whole Numbers and Unit Fractions	A) Multiplication as Repeated Addition	MGSE4.NF.4.a, MGSE4.NF.4.c
	B) Fractions as Whole Numbers Times Unit Fractions	
	C) Multiplying Whole Numbers and Unit Fractions	
8-2 Multiplying Whole Numbers and Fractions	A) Multiplying Whole Numbers and Fractions	MGSE4.NF.4.b, MGSE4.NF.4.c
	B) Changing Multiplying by a Fraction to Multiplying by a Unit Fraction	

Knowre Math: **Grade 4** Curriculum

Chapter 9 Decimals

Lesson	Topic	GA Standards of Excellence
9-1 Decimal Models	A) Models of Decimals	MGSE4.NF.6
	B) Models to Write Equivalent Fractions and Decimals	
9-2 Decimals on a Number Line	A) Writing Decimals Shown on Number Lines	MGSE4.NF.6
	B) Showing Decimals on Number Lines	
9-3 Decimal Place Value	A) Decimal Place Value	MGSE5.NBT.3.a
	B) Reading and Writing Decimals	
	C) Values of Digits in Decimals	
9-4 Comparing and Ordering Decimals	A) Models to Compare Decimals	MGSE4.NF.7
	B) Comparing Decimals	
	C) Ordering Decimals	
9-5 Decimals and Fractions	A) Writing Decimals as Fractions	MGSE4.NF.6
	B) Writing Fractions as Decimals	

Knowre Math: **Grade 4** Curriculum

Chapter 10 Measurement and Data

Lesson	Topic	GA Standards of Excellence
10-1 Customary Units of Length	A) Estimating Customary Units of Length	MGSE4.MD.1.b, MGSE4.MD.2
	B) Converting Customary Units of Length	
10-2 Customary Units of Volume and Weight	A) Estimating Customary Units of Volume	MGSE4.MD.1.a, MGSE4.MD.1.b, MGSE4.MD.2
	B) Converting Customary Units of Volume	
	C) Estimating Customary Units of Weight	
	D) Converting Customary Units of Weight	
10-3 Metric Units of Length	A) Estimating Metric Units of Length	MGSE4.MD.1.b, MGSE4.MD.2
	B) Converting Metric Units of Length	
10-4 Metric Units of Volume and Mass	A) Estimating Metric Units of Volume	MGSE4.MD.1.b, MGSE4.MD.2
	B) Converting Metric Units of Volume	
	C) Estimating Metric Units of Mass	
	D) Converting Metric Units of Mass	
10-5 Units of Time and Elapsed Time	A) Converting Units of Time	MGSE4.MD.1.b, MGSE4.MD.2
	B) Elapsed Time	
10-6 Line Plots	A) Line Plots and Data Sets	MGSE4.MD.4
	B) Interpreting Data in Line Plots	

Knowre Math: Grade 4 Curriculum

Chapter 11 Points, Lines, and Angles

Lesson	Topic	VA MSL
11-1 Points and Lines	A) Points and Lines	MGSE4.G.1
	B) Parallel and Perpendicular Lines	
11-2 Segments, Rays, and Angles	A) Segments	MGSE4.G.1
	B) Rays	
	C) Angles	
11-3 Angle Measures	A) Angle Measurement	MGSE4.MD.5.a, MGSE4.MD.5.b, MGSE4.MD.6, MGSE4.G.1
	B) Angle Addition	

Chapter 12 Triangles and Quadrilaterals

Lesson	Topic	VA MSL
12-1 Classifying Triangles	A) Angle Classification	MGSE4.G.2
	B) Angle Measures to Classify Triangles	
12-2 Classifying Quadrilaterals	A) Types of Quadrilaterals	MGSE4.G.2
12-3 Perimeter of Rectangles and Squares	A) Perimeters of Rectangles	MGSE4.MD.3
	B) Perimeters of Squares	
12-4 Area of Rectangles and Squares	A) Areas of Rectangles and Squares Given Figures	MGSE4.MD.3, MGSE4.MD.8
	B) Areas of Rectangles and Squares Given Descriptions	
12-5 Lines of Symmetry	A) Identifying Lines of Symmetry	MGSE4.G.3
	B) Figures with a Given Number of Lines of Symmetry	
	C) Results of Reflecting Over Lines of Symmetry	