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Chapter 1 Integer Addition and Subtraction

Lesson	Topic	GA Standards of Excellence
1-1 Integers	A) Using Algebra Tiles to Model Integers	MGSE6.NS.5, MGSE6.NS.6.a, MGSE6.NS.6.c, MGSE6.NS.7.c
	B) Integers on a Number Line	
	C) Comparing and Ordering Integers	
	D) Absolute Value	
1-2 Integer Addition with Tiles	A) Using Algebra Tiles to Model Addition of Integers with the Same Sign	MGSE7.NS.1.a, MGSE7.NS.1.b, MGSE7.NS.1.d, MGSE7.NS.3
	B) Using Algebra Tiles to Model Addition of Integers with Different Signs	
1-3 Integer Addition with Number Lines	A) Using Number Lines to Model Addition of Integers with Different Signs	MGSE7.NS.1.b, MGSE7.NS.1.d, MGSE7.NS.3
	B) Using Number Lines to Model Addition of Integers with the Same Sign	
1-4 Single-Digit Integer Addition	A) Adding One-Digit Integers	MGSE7.NS.1.b, MGSE7.NS.1.d, MGSE7.NS.3, MGSE7.EE.3
1-5 Integer Subtraction with Tiles	A) Using Algebra Tiles to Model Subtraction of Positive Integers	MGSE7.NS.1.c, MGSE7.NS.1.d, MGSE7.NS.3
	B) Using Algebra Tiles to Model Subtraction of Integers with Different Signs	
	C) Using Algebra Tiles to Model Subtraction of Negative Integers	
1-6 Single-Digit Integer Subtraction	A) Subtracting One-Digit Integers	MGSE7.NS.1.c, MGSE7.NS.1.d, MGSE7.NS.3, MGSE7.EE.3
1-7 Multi-Digit Integer Addition and Subtraction	A) Adding Multi-Digit Integers	MGSE7.NS.1.a, MGSE7.NS.1.b, MGSE7.NS.1.c, MGSE7.NS.1.d, MGSE7.NS.3, MGSE7.EE.3
	B) Subtracting Multi-Digit Integers	

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Chapter 2 Integer Operations

Lesson	Topic	GA Standards of Excellence
2-1 Integer Multiplication	A) Patterns in Integer Multiplication	MGSE7.NS.2.a, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
	B) Multiplying Integers	
2-2 Integer Division	A) Patterns in Integer Division	MGSE7.NS.2.b, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
	B) Dividing Integers	
2-3 Exponents	A) Powers with Natural Exponents	MGSE7.NS.2.a, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
2-4 Order of Operations	A) Order of Operations with Integers	MGSE7.NS.1.d, MGSE7.NS.2.a, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
	B) Evaluating Expressions with Variables	

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Chapter 3 Rational Numbers

Lesson	Topic	GA Standards of Excellence
3-1 GCF and LCM	A) Prime and Composite Numbers	MGSE7.NS.2.a, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
	B) Prime Factorization	
	C) Greatest Common Factors	
	D) Least Common Multiples	
3-2 Equivalent Fractions	A) Equivalent Fractions	MGSE7.NS.2.b, MGSE7.EE.2, MGSE7.EE.3
3-3 Converting Fractions and Decimals	A) Writing Fractions as Decimals	MGSE7.NS.2.d, MGSE7.EE.2, MGSE7.EE.3
	B) Writing Decimals as Fractions	
3-4 Comparing and Ordering Rational Numbers	A) Rational Numbers on a Number Line	MGSE7.EE.3
	B) Comparing and Ordering Positive and Negative Decimals	
	C) Comparing and Ordering Positive and Negative Fractions	
3-5 Adding and Subtracting Fractions	A) Using Integer Rules to Add and Subtract Fractions with Common Denominators	MGSE7.NS.1.b, MGSE7.NS.1.c, MGSE7.NS.1.d, MGSE7.NS.3, MGSE7.EE.3
	B) Using Integer Rules to Add and Subtract Fractions with Different Denominators	
3-6 Multiplying and Dividing Fractions	A) Using Integer Rules to Multiply Fractions	MGSE7.NS.2.a, MGSE7.NS.2.b, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.3
	B) Using Integer Rules to Divide Fractions	
3-7 Operations with Rational Numbers	A) Comparing Rational Numbers	MGSE7.NS.1.b, MGSE7.NS.1.c, MGSE7.NS.1.d, MGSE7.NS.2.a, MGSE7.NS.2.b, MGSE7.NS.2.c, MGSE7.NS.3, MGSE7.EE.2, MGSE7.EE.3
	B) Adding and Subtracting Rational Numbers	
	C) Multiplying and Dividing Rational Numbers	
	D) Order of Operations and Rational Numbers	

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Chapter 4 Expressions and Properties

Lesson	Topic	GA Standards of Excellence
4-1 Representations of Algebraic Expressions	A) Parts of Variable Expressions	MGSE7.EE.1
	B) Using Algebra Tiles to Model Algebraic Expressions	
4-2 Operations and Variable Expressions	A) Omitting Multiplication Symbols with Variables	MGSE7.EE.1, MGSE7.EE.2
	B) Coefficients	
4-3 Algebraic Expressions	A) Writing Variable Expressions	MGSE7.EE.1, MGSE7.EE.2
4-4 Properties of Numbers	A) Commutative Property	MGSE7.EE.1
	B) Associative Property	
	C) Identity Property	
	D) Inverse Property	
4-5 Modeling the Distributive Property	A) Using Algebra Tiles to Multiply a Monomial and a Binomial	MGSE7.EE.1, MGSE7.EE.2
	B) Using Tables to Multiply a Monomial and a Binomial	
4-6 Distributive Property	A) Using the Distributive Property to Write Equivalent Expressions	MGSE7.EE.1, MGSE7.EE.2
4-7 Simplifying Algebraic Expressions	A) Using Algebra Tiles to Combine Like Terms	MGSE7.EE.1, MGSE7.EE.2
	B) Simplifying Expressions with Like Terms	

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Chapter 5 Solving Equations

Lesson	Topic	GA Standards of Excellence
5-1 Equations	A) Identifying Equations and Expressions	MGSE7.EE.4.a, MGSE7.EE.4.c
	B) Writing Equations	
	C) Solutions of Equations	
5-2 Introduction to Bar Models	A) Showing One-Step Equations with Bar Models	MGSE7.EE.2, MGSE7.EE.4.a, MGSE7.EE.4.c
	B) Showing Two-Step Equations with Bar Models	
5-3 Solving One-Step Equations with Bar Models	A) Solutions of One-Step Equations in Bar Models	MGSE7.EE.4.c
	B) Using Bar Models to Solve One-Step Addition Equations	
	C) Using Bar Models to Solve One-Step Subtraction Equations	
	D) Using Bar Models to Solve One-Step Multiplication Equations	
5-4 Solving One-Step Addition and Subtraction Equations	A) Inverse Operation of Addition	MGSE7.EE.4.c
	B) Solving One-Step Equations with the Subtraction Property of Equality	
	C) Inverse Operation of Subtraction	
	D) Solving One-Step Equations with the Addition Property of Equality	
5-5 Solving One-Step Multiplication and Division Equations	A) Inverse Operation of Multiplication	MGSE7.EE.4.c
	B) Solving One-Step Equations with the Division Property of Equality	
	C) Inverse Operation of Division	
	D) Solving One-Step Equations with the Division Property of Equality	
5-6 Solving Two-Step Equations	A) Solutions of Two-Step Equations in Bar Models	MGSE7.EE.4.a
	B) Using Bar Models to Solve Two-Step Equations	
	C) Solving Two-Step Equations	
5-7 Solving Multi-Step Equations with Bar Models	A) Using Bar Models to Solve Multi-Step Equations with Variables on Both Sides	MGSE7.EE.4.a
	B) Using Bar Models to Solve Multi-Step Equations with the Distributive Property	
	C) Using Bar Models to Solve Multi-Step Equations with the Distributive Property and Variables on Both Sides	
5-8 Solving Multi-Step Equations	A) Solving Multi-Step Equations	MGSE7.EE.4.a
	B) Solving Equations with Variables on Both Sides	

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Chapter 5 Solving Equations (cont.)

5-9 Solving Equations with Rational Numbers	A) Solving Equations with Grouping Symbols in the Numerator	MGSE7.EE.4.a
	B) Using the Multiplicative Inverse to Solve Equations	
	C) Solving Equations with Fractions	
	D) Solving Equations with Decimals	

Chapter 6 Solving Inequalities

Lesson	**Topic**	**GA Standards of Excellence**
6-1 Inequalities	A) Reading and Writing Inequalities	MGSE7.EE.4.b
	B) Solutions of Inequalities	
	C) Graphs of Inequalities	
6-2 Solving One-Step Addition and Subtraction Inequalities	A) Writing Inequalities	MGSE7.EE.4.b
	B) Solutions of Inequalities	
	C) Solving One-Step Inequalities by Adding or Subtracting on Both Sides	
6-3 Solving One-Step Multiplication and Division Inequalities	A) Solving One-Step Inequalities by Multiplying or Dividing Both Sides by a Positive Number	MGSE7.EE.4.b
	B) Solving One-Step Inequalities by Multiplying or Dividing Both Sides by a Negative Number	
6-4 Solving Multi-Step Inequalities	A) Solving Two-Step Inequalities	MGSE7.EE.4.b
	B) Solving Multi-Step Inequalities	
	C) Solving Inequalities with Variables on Both Sides	

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Chapter 7 Ratio, Proportion, and Similarity

Lesson	Topic	GA Standards of Excellence
7-1 Unit Rates	A) Unit Rates	MGSE7.RP.1, MGSE7.RP.2.b, MGSE7.RP.2.d
	B) Unit Rates from Tables and Graphs	
	C) Unit Rates to Find Values	
7-2 Proportions	A) Defining Proportions	MGSE7.RP.1, MGSE7.RP.2.a, MGSE7.RP.2.c, MGSE7.RP.3
	B) Solving Proportions	
	C) Writing Proportions	
7-3 Rate Conversions	A) Converting Units Within a Measurement System	MGSE7.RP.1, MGSE7.RP.2.b, MGSE7.RP.2.c, MGSE7.RP.3
	B) Converting Units Between Measurement Systems	
	C) Converting Rates	
7-4 Similarity	A) Angle Measures in Similar Triangles	MGSE7.RP.2.a, MGSE7.RP.2.b, MGSE7.RP.2.c, MGSE7.RP.3
	B) Side Lengths in Similar Figures	
7-5 Scale	A) Determining Scale	MGSE7.RP.2.b, MGSE7.RP.2.c, MGSE7.RP.3, MGSE7.G.1
	B) Using Scale	

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Chapter 8 Percents

Lesson	Topic	GA Standards of Excellence
8-1 Fractions, Decimals, and Percents	A) Converting Between Fractions and Percents	MGSE7.EE.3
	B) Converting Between Decimals and Percents	
	C) Using Division to Convert Fractions to Percents	
8-2 Proportions with Percents	A) Percent Proportions	MGSE7.RP.2.c MGSE7.RP.3
8-3 Proportions with Equations	A) Percent Equations	MGSE7.RP.2.c
8-4 Reasoning with Percents	A) Mental Math to Find a Percent of a Number	MGSE7.NS.3 MGSE7.EE.2 MGSE7.EE.3
	B) Estimating with Percents	
8-5 Percent Change	A) Amount of Change	MGSE7.EE.2
	B) Percent Change	
8-6 Discounts and Markups	A) Discount	MGSE7.RP.3 MGSE7.EE.2
	B) Markup	

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Chapter 9 Graphs and Functions

Lesson	Topic	GA Standards of Excellence
9-1 Coordinate Plane	A) Identifying Quadrants and Axes of Coordinate Planes	MGSE6.NS.6.b, MGSE6.NS.6.c
	B) Graphing Points	
	C) Writing the Coordinates of Points	
	D) Identifying Quadrants and Axes from Coordinates	
9-2 Relations	A) Representing Relations in Different Forms	MGSE8.F.1
	B) Input and Output	
9-3 Domain and Range	A) Independent and Dependent Variables	MGSE8.F.1
	B) Domain and Range	
	C) Relations and Functions	
9-4 Linear Functions	A) Graphs of Linear Functions	MGSE6.EE.9.a, MGSE6.EE.9.b
	B) Using Linear Functions to Complete Tables	
	C) Graphing Linear Functions	
	D) Writing Linear Functions	
	E) Identifying Intercepts	
9-5 Direct Variation Graphs	A) Graphs of Direct Variation	MGSE7.RP.2.b, MGSE7.RP.2.c, MGSE7.RP.2.d
	B) Equations of Direct Variation	
9-6 Direct Variation Tables and Equations	A) Tables of Direct Variation	MGSE7.RP.2.b, MGSE7.RP.2.c
	B) Direct Variation Equations and Coordinate Pairs	

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Chapter 10 Angles and Triangles

Lesson	Topic	GA Standards of Excellence
10-1 Points and Lines	A) Points	MGSE4.G.1
	B) Lines	
	C) Rays	
	D) Segments	
10-2 Angles	A) Parts of Angles	MGSE7.G.5
	B) Naming Angles	
	C) Adjacent Angles	
	D) Angle Measures	
10-3 Complementary and Supplementary Angles	A) Complementary Angles	MGSE7.G.5
	B) Supplementary Angles	
10-4 Linear Pairs and Vertical Angles	A) Linear Pairs	MGSE7.G.5
	B) Vertical Angles	
10-5 Lengths of Sides in Triangles	A) Relationship Among Side Lengths in a Triangle	MGSE7.G.2
	B) Possible Lengths of Longest or Shortest Sides in a Triangle	
10-6 Angle Measures in Triangles	A) Sum of the Measure of Interior Angles of a Triangle	7MGSE7.G.2
	B) Finding a Missing Angle Measure in a Triangle	

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Chapter 11 Area, Surface Area, and Volume

Lesson	Topic	GA Standards of Excellence
11-1 Area of Polygons	A) Areas of Triangles and Quadrilaterals	MGSE7.G.6
	B) Solving Area Equations to Find Missing Measurements	
11-2 Circumference of Circles	A) Parts of Circles	MGSE7.G.4
	B) Relationship Between Radius and Diameter	
	C) Circumference	
11-3 Area of Circles	A) Areas of Circles from Radius	MGSE7.G.4
	B) Areas of Circles from Diameter	
11-4 Naming Three-Dimensional Solids	A) Bases of Solids	MGSE7.G.3
	B) Naming Solids	
	C) Cross Sections of Solids	
11-5 Surface Area of Cylinders and Right Prisms	A) Lateral Faces of Prisms	MGSE7.G.6
	B) Surface Areas of Prisms	
	C) Surface Areas of Cylinders	
11-6 Volume of Cylinders and Right Prisms	A) Volumes of Prisms	MGSE7.G.6
	B) Volumes of Cylinders	
11-7 Surface Area of Right Pyramids	A) Lateral Faces of Pyramids	MGSE7.G.6
	B) Slant Height	
	C) Surface Areas of Pyramids	
11-8 Volume of Pyramids and Cones	A) Volumes of Pyramids	MGSE7.G.6
	B) Volumes of Cones	

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Chapter 12 Probability

Lesson	Topic	GA Standards of Excellence
12-1 Outcomes	A) Numbers that Represent Probability	MGSE7.SP.5
	B) Possible Outcomes	
	C) Events	
	D) Favorable Outcomes	
	E) Likely and Unlikely Events	
12-2 Experimental Probability	A) Equation for Experimental Probability	MGSE7.SP.6, MGSE7.SP.7.b
	B) Experimental Probability of Single Event	
	C) Experimental Probability of Multiple Events	
12-3 Theoretical Probability	A) Equation for Theoretical Probability	MGSE7.SP.6, MGSE7.SP.7.a, MGSE7.SP.7.b
	B) Theoretical Probability of Single Event	
	C) Theoretical Probability of Multiple Events	
12-4 Compound Independent Events	A) Tree Diagrams and Outcomes of Independent Events	MGSE7.SP.8.b, MGSE7.SP.8.c
	B) Tables and Outcomes of Independent Events	
	C) Using Multiplication to Count Outcomes for Independent Events	
12-5 Compound Dependent Events	A) Tree Diagrams and Outcomes of Dependent Events	MGSE7.SP.8.b, MGSE7.SP.8.c
	B) Using Multiplication to Count Outcomes for Dependent Events	
12-6 Compound Probability	A) Probability Notation for Compound Events	MGSE7.SP.7.a, MGSE7.SP.8.a, MGSE7.SP.8.b, MGSE7.SP.8.c
	B) Probability of Independent Events	
	C) Probability of Dependent Events	

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Chapter 13 Data Analysis

Lesson	Topic	GA Standards of Excellence
13-1 Populations, Samples, and Bias	A) Population	MGSE7.SP.1, MGSE7.SP.2
	B) Samples	
	C) Data Sets from Random Representative Samples	
13-2 Making Inferences From Data	A) Samples and Conclusions	MGSE7.SP.1, MGSE7.SP.2
	B) Samples and Predictions	
	C) Supporting Predictions and Conclusions	
13-3 Measures of Center	A) Mean	MGSE7.SP.4
	B) Median	
	C) Mean and Median of Same Data Set	
13-4 Measures of Variation	A) Range	MGSE7.SP.1, MGSE7.SP.3, MGSE7.SP.4
	B) MAD	
	C) Quartiles and IQR	
	D) Measures of Variation and Measures of Center	
13-5 Comparative Inferences	A) Dot Plots and Measures of Center and Variability	MGSE7.SP.1, MGSE7.SP.2, MGSE7.SP.3, MGSE7.SP.4
	B) Mean as a Multiple of MAD	
	C) Making Statements about Data Sets from Measures of Center and Variability	