i-Ready Classroom Mathematics

to the

2023 Arkansas Mathematics Standards

Grade 6

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
Grade 6		
6.NCC	**Number Concepts & Computations**	
	Rational Numbers	
	Students use fractions, decimals, integers, and absolute values to represent real-world situations.	
6.NCC.1	Explain positive and negative integers as being opposite values or directions and the meaning of 0 in a real-world context.	**Lesson 23:** Understand Positive and Negative Numbers **Supporting Content:** Lesson 24: Order Positive and Negative Numbers; Lesson 25: Understand Absolute Value; Lesson 26: Write and Graph One-Variable Inequalities; Lesson 27: Understand the Four-Quadrant Coordinate Plane **Math in Action:** pp. 643–651
6.NCC.2	Find and plot rational numbers on horizontal and vertical number lines in real-world and mathematical problems.	**Lesson 23:** Understand Positive and Negative Numbers **Lesson 27**: Understand the Four-Quadrant Coordinate Plane **Supporting Content:** **Math in Action:** pp. 643–651
6.NCC.3	Compare rational numbers, using inequalities (<, >,≤, ≥, ≠) and order on a number line.	**Lesson 24:** Order Positive and Negative Numbers **Supporting Content:** Lesson 26: Write and Graph One-Variable Inequalities
6.NCC.4	Interpret the absolute value of numbers for positive or negative quantities in a real-world context.	**Lesson 25:** Understand Absolute Value **Supporting Content:** Lesson 28: Solve Problems in the Coordinate Plane **Math in Action**: pp. 643–651
6.NCC.5	Convert between fractions, decimals, and percents in real-world and mathematical problems.	**Lesson 17:** Understand Percents **Supporting Content:** **Math in Action:** pp. 419–427

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	Rational Number Operations	
	Students extend previous knowledge of operations to decimals and fractions, involving positive rational numbers.	
6.NCC.6	Interpret and represent quotients of fractions. • Fractions include all forms of fractions.	**Lesson 9:** Understand Division with Fractions **Lesson 10:** Divide Fractions **Supporting Content:** Lesson 11: Solve Volume Problems with Fractions; Lesson 21: Write and Solve One-Variable Equations **Math in Action:** pp. 251–259
6.NCC.7	Solve problems involving the division of fractions in real-world and mathematical problems. • Fractions include all forms of fractions.	**Lesson 9:** Understand Division with Fractions **Lesson 10:** Divide Fractions **Supporting Content:** Lesson 11: Solve Volume Problems with Fractions; Lesson 21: Write and Solve One-Variable Equations **Math in Action:** pp. 251–259
6.NCC.8	Divide multi-digit numbers fluently in real-world and mathematical problems.	**Lesson 8:** Divide Whole Numbers and Multi-Digit Decimals **Supporting Content:** Lesson 21: Write and Solve One-Variable Equations; Lesson 32: Interpret Mean and Mean Absolute Deviation; Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 251–259

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
6.NCC.9	Use any standard algorithm to fluently add and subtract multi-digit decimals and fractions in real-world and mathematical problems.	**Lesson 7**: Add, Subtract, and Multiply Multi-Digit Decimals **Supporting Content:** Lesson 1: Find the Area of a Parallelogram; Lesson 2: Find the Area of Triangles and Other Polygons; Lesson 3: Use Nets to Find Surface Area; Lesson 16: Use Unit Rates to Solve Problems; Lesson 18: Use Percents to Solve Problems; Lesson 21: Write and Solve One-Variable Equations; Lesson 31: Interpret Median and Interquartile Range in Box Plots; Lesson 32: Interpret Mean and Mean Absolute Deviation; Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 251–259
6.NCC.10	Use any standard algorithm to fluently multiply and divide multi-digit decimals and fractions in real-world and mathematical problems.	**Lesson 7**: Add, Subtract, and Multiply Multi-Digit Decimals **Lesson 8**: Divide Whole Numbers and Multi-Digit Decimals **Supporting Content:** Lesson 1: Find the Area of a Parallelogram; Lesson 2: Find the Area of Triangles and Other Polygons; Lesson 3: Use Nets to Find Surface Area; Lesson 16: Use Unit Rates to Solve Problems; Lesson 18: Use Percents to Solve Problems; Lesson 21: Write and Solve One-Variable Equations; Lesson 31: Interpret Median and Interquartile Range in Box Plots; Lesson 32: Interpret Mean and Mean Absolute Deviation; Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 251–259

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
	Common Factors and Multiples	
	Students use factors and multiples to solve problems.	
6.NCC.11	Solve real-world and mathematical problems with the greatest common factor of two whole numbers less than or equal to 100.	**Lesson 6**: Find Greatest Common Factor and Least Common Multiple **Lesson 19**: Write and Identify Equivalent Expressions **Supporting Content**: **Math in Action**: pp. 129–137; 525–533
6.NCC.12	Solve real-world and mathematical problems with the least common multiple of two whole numbers less than or equal to 12.	**Lesson 6:** Find Greatest Common Factor and Least Common Multiple **Supporting Content:** **Math in Action**: pp. 129–137
6.NCC.13	Use the distributive property and the greatest common factor to rewrite the sum of two whole numbers, 1 through 100.	**Lesson 6:** Find Greatest Common Factor and Least Common Multiple **Lesson 19**: Write and Identify Equivalent Expressions **Supporting Content:** **Math in Action**: pp. 129–137; 525–533
6.PR	**Proportional Relationships**	
	Ratio & Rates	
	Students understand ratio concepts and use proportional reasoning to solve problems.	
6.PR.1	Use precise ratio language and notation to describe a ratio as a relationship between two quantities.	**Lesson 12:** Understand Ratio Concepts **Supporting Content:** **Math in Action:** pp. 329–337
6.PR.2	Calculate unit rates to include unit pricing and constant speed.	**Lesson 16**: Use Unit Rates to Solve Problems **Supporting Content:** Lesson 13: Find Equivalent Ratios **Math in Action**: pp. 419–427

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
6.PR.3	Give examples of unit rates as a ratio that compares two quantities with different units of measure, limited to non-complex fractions.	**Lesson 15:** Understand Rate Concepts **Supporting Content:** Lesson 12: Understand Ratio Concepts; Lesson 16: Use Unit Rates to Solve Problems **Math in Action**: pp. 419–427
6.PR.4	Create various representations to compare ratios and find missing values to solve real-world and mathematical problems.	**Lesson 13**: Find Equivalent Ratios **Lesson 14:** Use Part-to-Part and Part-to-Whole Ratios **Lesson 16**: Use Unit Rates to Solve Problems **Lesson 17**: Understand Percents **Lesson 18**: Use Percents to Solve Problems **Supporting Content:** Lesson 12: Understand Ratio Concepts; Lesson 15: Understand Rate Concepts; Lesson 21: Write and Solve One-Variable Equations; Lesson 22: Analyze Two-Variable Relationships **Math in Action:** pp. 329–337
6.PR.5	Find a percent of a quantity as a rate per 100 and solve problems involving finding the whole when given a part and the percent.	**Lesson 17:** Understand Percents **Lesson 18**: Use Percents to Solve Problems **Supporting Content:** **Math in Action:** pp. 419–427
6.ALG	**Algebra**	
	Expressions	
	Students extend their understanding of arithmetic to algebraic expressions.	
6.ALG.1	Read and write expressions in real-world or mathematical problems in which letters stand for numbers.	**Lesson 4:** Work with Algebraic Expressions **Lesson 5:** Write and Evaluate Expressions with Exponents
6.ALG.2	Use mathematical terms to identify parts of an expression, including the names of operations, terms, factors, coefficients, variables, and constants.	**Lesson 4**: Work with Algebraic Expressions **Supporting Content:** Lesson 5: Write and Evaluate Expressions with Exponents; Lesson 19: Write and Identify Equivalent Expressions

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
6.ALG.3	Write and evaluate expressions for given values of variables, using order of operations, including expressions with whole number exponents.	**Lesson 4**: Work with Algebraic Expressions **Lesson 5**: Write and Evaluate Expressions with Exponents **Supporting Content:** Lesson 1: Find the Area of a Parallelogram; Lesson 2: Find the Area of Triangles and Other Polygons; Lesson 3: Use Nets to Find Surface Area; Lesson 7: Add, Subtract, and Multiply Multi-Digit Decimals; Lesson 11: Solve Volume Problems with Fractions; Lesson 20: Understand Solutions of Equations **Math in Action**: pp. 129–137
6.ALG.4	Generate equivalent expressions by applying the associative, commutative, distributive, and identity properties.	**Lesson 19**: Write and Identify Equivalent Expressions **Supporting Content:** Lesson 4: Work with Algebraic Expressions; Lesson 21: Write and Solve One-Variable Equations **Math in Action**: pp. 525–533
6.ALG.5	Identify when two expressions are equivalent by using properties of operations including like terms.	**Lesson 19:** Write and Identify Equivalent Expressions **Supporting Content:** Lesson 4: Work with Algebraic Expressions **Math in Action:** pp. 525–533
	Equations & Inequalities	
	Students focus on reasoning about and solving equations and inequalities.	
6.ALG.6	Use substitution to determine if a given value in a specified set makes an equation or inequality true. • Include the following inequality symbols: <, >, ≤, ≥, ≠	**Lesson 20:** Understand Solutions of Equations **Lesson 26**: Write and Graph One-Variable Inequalities **Supporting Content:** Lesson 21: Write and Solve One-Variable Equations **Math in Action**: pp. 643–651 *Note: The lessons cited do not use the symbol ≠.*

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
6.ALG.7	Write and solve one-step equations in real-world and mathematical problems, involving positive rational numbers and zero.	**Lesson 21:** Write and Solve One-Variable Equations
6.ALG.8	Write, solve, and graph one-step inequalities in real-world and mathematical problems.	**Lesson 26:** Write and Graph One-Variable Inequalities
6.GM	**Geometry & Measurement**	
	Area, Volume, & Surface Area	
	Students solve problems involving area, volume, and surface area.	
6.GM.1	Find the area of triangles, quadrilaterals, and polygons by composing or decomposing to solve real-world and mathematical problems.	**Lesson 1:** Find the Area of a Parallelogram **Lesson 2:** Find the Area of Triangles and Other Polygons **Supporting Content:** Lesson 7: Add, Subtract, and Multiply Multi-Digit Decimals; Lesson 8: Divide Whole Numbers and Multi-Digit Decimals; Lesson 10: Divide Fractions; Lesson 28: Solve Problems in the Coordinate Plane **Math in Action:** pp. 129–137
6.GM.2	Apply the formulas $V = lwh$ and $V = Bh$ to find the volume of right rectangular prisms with fractional edge lengths to solve real-world and mathematical problems, including solving for an unknown dimension.	**Lesson 11:** Solve Volume Problems with Fractions **Supporting Content:** Lesson 21: Write and Solve One-Variable Equations **Math in Action:** pp. 251–259
6.GM.3	Construct nets of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid, using the nets to find the surface area of these prisms.	**Lesson 3:** Use Nets to Find Surface Area **Supporting Content:** Lesson 5: Write and Evaluate Expressions with Exponents; Lesson 7: Add, Subtract, and Multiply Multi-Digit Decimals **Math in Action:** pp. 129–137

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
	Coordinate Plane System	
	Students graph points in all four quadrants.	
6.GM.4	Find and graph pairs of rational numbers in all four quadrants of the coordinate plane in real-world and mathematical problems.	**Lesson 23:** Understand Positive and Negative Numbers **Lesson 27**: Understand the Four-Quadrant Coordinate Plane **Supporting Content:** Lesson 24: Order Positive and Negative Numbers; Lesson 26: Write and Graph One-Variable Inequalities; Lesson 28: Solve Problems in the Coordinate Plane **Math in Action**: pp. 643–651
6.GM.5	Draw polygons in the coordinate plane when given coordinates for the vertices.	**Lesson 28**: Solve Problems in the Coordinate Plane **Supporting Content:** Lesson 27: Understand the Four-Quadrant Coordinate Plane **Math in Action:** pp. 643–651
6.GM.6	Use coordinates to calculate vertical and horizontal distances between points with the same x-coordinate or the same y-coordinate to solve real-world and mathematical problems.	**Lesson 28**: Solve Problems in the Coordinate Plane **Supporting Content:** Lesson 27: Understand the Four-Quadrant Coordinate Plane **Math in Action:** pp. 643–651
	Conversions	
	Students apply measurement knowledge to solve real-world problems.	
6.GM.7	Convert measurements within and between the metric and customary measurement systems to solve real-world and mathematical problems.	**Lesson 16:** Use Unit Rates to Solve Problems **Supporting Content:** **Math in Action:** pp. 419–427

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
6.SP	**Statistics & Probability**	
	Statistical & Nonstatistical	
	Students recognize that data collected to answer a statistical question can be analyzed by their distributions.	
6.SP.1	Identify the difference between statistical and non-statistical questions and write simple statistical questions that allow variable responses.	**Lesson 29:** Understand Statistical Questions and Data Distributions **Supporting Content:** **Math in Action:** pp. 753–761
	Measures of Center	
	Students explore mean, median, and mode.	
6.SP.2	Calculate and interpret any measure of center (mean, median, and mode) of a numerical data set.	**Lesson 31:** Interpret Median and Interquartile Range in Box Plots **Lesson 32**: Interpret Mean and Mean Absolute Deviation **Supporting Content:** Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action**: pp. 753–761
6.SP.3	Determine which measure of center (mean or median) is more appropriate to describe the center of data and justify the choice.	**Lesson 31:** Interpret Median and Interquartile Range in Box Plots **Lesson 32**: Interpret Mean and Mean Absolute Deviation **Supporting Content:** Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action**: pp. 753–761
6.SP.4	Describe how the mean or median is affected by outliers of a numerical data set.	**Lesson 31:** Interpret Median and Interquartile Range in Box Plots **Lesson 32**: Interpret Mean and Mean Absolute Deviation **Supporting Content:** Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action**: pp. 753–761

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
	Measures of Variation	
	Students explore range and interquartile range.	
6.SP.5	Calculate and interpret the measure of variation [range and interquartile range (IQR)] of a numerical data set.	**Lesson 31**: Interpret Median and Interquartile Range in Box Plots **Supporting Content:** Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 753–761
6.SP.6	Determine which measure of variation (range or interquartile range) is more appropriate to describe the shape; justify the choice.	**Lesson 31**: Interpret Median and Interquartile Range in Box Plots **Supporting Content:** Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 753–761

2023 Arkansas Mathematics Standards Grade 6		i-Ready Classroom Mathematics ©2024 Grade 6
	Numerical Data	
	Students summarize and describe distributions.	
6.SP.7	Represent numerical data on a number line, histogram, and box plot.	**Lesson 30**: Use Dot Plots and Histograms to Describe Data Distributions **Lesson 31**: Interpret Median and Interquartile Range in Box Plots **Supporting Content**: Lesson 29: Understand Statistical Questions and Data Distributions; Lesson 32: Interpret Mean and Mean Absolute Deviation; Lesson 33: Use Measures of Center and Variability to Summarize Data **Math in Action:** pp. 753–761
6.SP.8	Calculate the relative frequency of an interval of data values when given a histogram.	**Lesson 30:** Use Dot Plots and Histograms to Describe Data Distributions *Note: The lesson cited requires students to calculate frequency, but does not include calculating the relative frequency of data.*
6.SP.9	Interpret a box plot to answer statistical questions about a data set.	**Lesson 31:** Interpret Median and Interquartile Range in Box Plots **Supporting Content**: Lesson 29: Understand Statistical Questions and Data Distributions **Math in Action:** pp. 753–761

i-Ready Classroom Mathematics

to the

2023 Arkansas Mathematics Standards

Grade 7

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
Grade 7		
7.NCC	**Number Concepts & Computations**	
	Rational Numbers	
	Students model and compute with rational numbers.	
7.NCC.1	Represent addition and subtraction of rational numbers in real-world contexts using a variety of forms.	**Lesson 7:** Understand Addition with Negative Integers **Lesson 8**: Add with Negative Numbers **Lesson 9**: Understand Subtraction with Negative Integers **Lesson 10**: Add and Subtract Positive and Negative Numbers **Supporting Content**: Lesson 14: Use the Four Operations with Negative Numbers **Math in Action:** pp. 203–211
7.NCC.2	Model and describe additive inverse in real-world situations to show opposite quantities combine to make 0.	**Lesson 7:** Understand Addition with Negative Integers **Supporting Content**: Lesson 8: Add with Negative Numbers; Lesson 10: Add and Subtract Positive and Negative Numbers **Math in Action**: pp. 203–211
7.NCC.3	Demonstrate in real-world contexts the distance between two rational numbers on the number line as the absolute value of their differences.	**Lesson 7:** Understand Addition with Negative Integers **Supporting Content:** Lesson 8: Add with Negative Numbers; Lesson 10: Add and Subtract Positive and Negative Numbers **Math in Action**: pp. 203–211
7.NCC.4	Convert a rational number in fraction form to decimal form and recognize that the decimal form of a rational number terminates in 0s or eventually repeats.	**Lesson 13:** Express Rational Numbers as Terminating or Repeating Decimals **Supporting Content:** Lesson 30: Understand Probability **Math in Action:** pp. 291–299

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.NCC.5	Interpret the products and quotients of rational numbers by describing real-world contexts.	**Lesson 11:** Understand Multiplication with Negative Integers **Lesson 12:** Multiply and Divide with Negative Numbers **Supporting Content:** Lesson 30: Understand Probability
	Rational Number Operations	
	Students apply all properties and operations to all rational numbers.	
7.NCC.6	Apply properties of operations as strategies to fluently add, subtract, multiply, and divide rational numbers.	**Lesson 8**: Add with Negative Numbers **Lesson 10:** Add and Subtract Positive and Negative Numbers **Lesson 12:** Multiply and Divide with Negative Numbers **Supporting Content:** Lesson 7: Understand Addition with Negative Integers; Lesson 9: Understand Subtraction with Negative Integers; Lesson 11: Understand Multiplication with Negative Integers; Lesson 15: Write Equivalent Expressions Involving Rational Numbers; Lesson 17: Understand Multi-Step Equations **Math in Action**: pp. 203–211
7.NCC.7	Use addition and subtraction with rational numbers in any form to solve multi-step problems in real-world and mathematical contexts.	**Lesson 14**: Use the Four Operations with Negative Numbers **Supporting Content:** Lesson 15: Write Equivalent Expressions Involving Rational Numbers; Lesson 20: Solve Problems Involving Percents; Lesson 21: Solve Problems Involving Percent Change and Percent Error; Lesson 24: Compare Populations; Lesson 25: Solve Problems Involving Area and Surface Area; Lesson 26: Solve Problems Involving Volume **Math in Action:** pp. 291–299

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.NCC.8	Use multiplication and division with rational numbers in any form to solve multi-step problems in real-world and mathematical contexts.	**Lesson 14**: Use the Four Operations with Negative Numbers **Supporting Content:** Lesson 15: Write Equivalent Expressions Involving Rational Numbers; Lesson 20: Solve Problems Involving Percents; Lesson 21: Solve Problems Involving Percent Change and Percent Error; Lesson 24: Compare Populations; Lesson 25: Solve Problems Involving Area and Surface Area; Lesson 26: Solve Problems Involving Volume **Math in Action:** pp. 291–299
7.NCC.9	Apply operations with rational numbers involving the order of operations, involving nested grouping symbols.	**Lesson 15**: Write Equivalent Expressions Involving Rational Numbers **Supporting Content**: Lesson 16: Understand Reasons for Rewriting Expressions; Lesson 17: Understand Multi-Step Equations; Lesson 18: Write and Solve Multi-Step Equations; Lesson 19: Write and Solve Inequalities **Math in Action:** pp. 403–411
7.PR	**Proportional Relationships**	
	Ratio & Rates	
	Students analyze and use unit rates to solve problems.	
7.PR.1	Determine the unit rate (constant of proportionality) from tables, graphs, equations, diagrams, or verbal descriptions of proportional relationships.	**Lesson 3**: Understand Proportional Relationships **Lesson 4:** Represent Proportional Relationships **Lesson 5:** Solve Proportional Relationship Problems **Supporting Content:** Lesson 1: Solve Problems Involving Scale

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.PR.2	Calculate unit rates in real-world contexts that include complex fractions.	**Lesson 2:** Find Unit Rates Involving Ratios of Fractions **Supporting Content:** Lesson 4: Represent Proportional Relationships; Lesson 5: Solve Proportional Relationship Problems **Math in Action:** pp. 119–127
7.PR.3	Solve multi-step ratio and percent problems in a real-world context, including percent error and percent increase and decrease.	**Lesson 5:** Solve Proportional Relationship Problems **Lesson 20**: Solve Problems Involving Percents **Lesson 21:** Solve Problems Involving Percent Change and Percent Error **Supporting Content:** Lesson 23: Reason About Random Samples; Lesson 24: Compare Populations; Lesson 31: Solve Problems Involving Experimental Probability **Math in Action:** pp. 525–533
	Constant of Proportionality	
	Students analyze proportional relationships and solve multi-step ratio and percent problems.	
7.PR.4	Determine whether two quantities represent proportional relationships by using equivalent ratios in a table and by graphing on a coordinate plane.	**Lesson 4**: Represent Proportional Relationships **Supporting Content:** Lesson 5: Solve Proportional Relationship Problems **Math in Action:** pp. 119–127
7.PR.5	Compare two different proportional relationships represented in different forms.	**Lesson 4**: Represent Proportional Relationships **Lesson 5:** Solve Proportional Relationship Problems **Supporting Content:** **Math in Action:** pp. 119–127

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.PR.6	Create equations in the form of $y = mx$ from tables, verbal descriptions, or graphs.	**See Grade 7:** **Lesson 3:** Understand Proportional Relationships **Lesson 4:** Represent Proportional Relationships **Supporting Content:** Lesson 5: Solve Proportional Relationship Problems **Math in Action:** pp. 119–127 **See Grade 8:** **Lesson 9:** Derive and Graph Linear Equations of the Form $y = mx + b$
7.PR.7	Given a graph with a proportional relationship, explain the meaning of a point (x, y) on the graph, including the origin (0, 0) and the unit rate $(1, r)$.	**Lesson 4:** Represent Proportional Relationships **Supporting Content:** **Math in Action**: pp. 119–127
7.ALG	**Algebra**	
	Expressions	
	Students apply properties of operations to create equivalent expressions.	
7.ALG.1	Generate and justify equivalent expressions, using properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients within mathematical and real-world problems.	**Lesson 15**: Write Equivalent Expressions Involving Rational Numbers **Lesson 16:** Understand Reasons for Rewriting Expressions **Supporting Content**: Lesson 17: Understand Multi-Step Equations; Lesson 18: Write and Solve Multi-Step Equations; Lesson 19: Write and Solve Inequalities **Math in Action:** pp. 403–411
	Equations & Inequalities	
	Students apply previous knowledge of equations and inequalities to two-step problems.	
7.ALG.2	Model and solve fluently two-step equations in real-world or mathematical problems.	**Lesson 17:** Understand Multi-Step Equations **Lesson 18**: Write and Solve Multi-Step Equations **Supporting Content:** **Math in Action:** pp. 403–411

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.ALG.3	Create, solve, and graph two-step inequalities in real-world and mathematical problems in the forms $px \pm q > r$, $px \pm q < r$, $px \pm q \geq r$, and $px \pm q \leq r$.	**Lesson 19:** Write and Solve Inequalities **Supporting Content:** Lesson 29: Draw Plane Figures with Given Conditions **Math in Action**: pp. 403–411
	Relationships between Quantities	
	Students use understanding of algebraic expressions and equations to represent relationships between two quantities.	
7.ALG.4	Write an equation to express two quantities in terms of the dependent and independent variables.	**See Grade 6:** **Lesson 22:** Analyze Two-Variable Relationships
7.ALG.5	Describe the relationship between the dependent and independent variables in an equation using tables and graphs, relating these to the equation.	**See Grade 6:** **Lesson 22:** Analyze Two-Variable Relationships
7.GM	**Geometry & Measurement**	
	Area, Volume, & Surface Area	
	Students solve problems involving area, volume, and surface area.	
7.GM.1	Describe the proportional relationship between the circumference and diameter of a circle.	**Lesson 6:** Solve Area and Circumference Problems Involving Circles **Supporting Content:** Lesson 25: Solve Problems Involving Area and Surface Area; Lesson 26: Solve Problems Involving Volume **Math in Action**: pp. 119–127
7.GM.2	Use area and circumference formulas of a circle to solve real-world and mathematical problems.	**Lesson 6:** Solve Area and Circumference Problems Involving Circles **Supporting Content:** Lesson 25: Solve Problems Involving Area and Surface Area; Lesson 26: Solve Problems Involving Volume **Math in Action**: 119–132

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.GM.3	Apply the formulas for the volume and surface area of right rectangular prisms, rectangular pyramids, triangular prisms, and triangular pyramids to solve real-world and mathematical problems.	**Lesson 25**: Solve Problems Involving Area and Surface Area **Lesson 26**: Solve Problems Involving Volume **Supporting Content:** Lesson 15: Write Equivalent Expressions Involving Rational Numbers; Lesson 16: Understand Reasons for Rewriting Expressions **Math in Action:** pp. 657–665
	Cross Sections	
	Students describe cross sections of three-dimensional figures.	
7.GM.4	Describe the two-dimensional figure that results from slicing a three-dimensional figure parallel and perpendicular to the base. • Three-dimensional figures include: right rectangular prisms, triangular prisms, and cylinders	**Lesson 27**: Describe Plane Sections of Three-Dimensional Figures
	Triangles & Angles	
	Students solve problems using various angle properties of lines.	
7.GM.5	Solve multi-step problems involving supplementary, complementary, vertical, and adjacent angles to include solving for an unknown angle in a figure.	**Lesson 28:** Find Unknown Angle Measures **Supporting Content:** **Math in Action:** pp. 657–665
	Scale	
	Students understand and use scale factor.	
7.GM.6	Calculate the scale factor, compute the actual lengths from the scale in a drawing, and reproduce a scale drawing using another scale.	**Lesson 1**: Solve Problems Involving Scale **Supporting Content**: Lesson 2: Find Unit Rates Involving Ratios of Fractions; Lesson 29: Draw Plane Figures with Given Conditions **Math in Action**: pp. 119–127

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
7.SP	**Statistics & Probability**	
	Numerical Data	
	Students interpret and organize data.	
7.SP.1	Interpret data displayed in a histogram and box plot to answer questions about the data.	**See Grade 6:** **Lesson 30:** Use Dot Plots and Histograms to Describe Data Distributions **See Grade 7:** **Lesson 24**: Compare Populations **Supporting Content:** **Math in Action**: pp. 525–533
7.SP.2	Recognize, create, and interpret categorical data in a circle graph.	*This standard is not addressed in iReady Classroom Mathematics.*
7.SP.3	Graph two numerical data sets and compare their variability. • Variability includes: range, interquartile range, or mean absolute deviation	**Lesson 24**: Compare Populations **Supporting Content:** **Math in Action**: pp. 525–533
7.SP.4	Select an appropriate measure(s) of center or variability and draw valid comparative inferences for two data sets.	**Lesson 24**: Compare Populations **Supporting Content:** **Math in Action**: pp. 525–533
	Sampling & Population	
	Students understand sampling and use samples to make inferences.	
7.SP.5	Distinguish between a random and non-random sample.	**Lesson 22:** Understand Random Sampling **Supporting Content:** Lesson 23: Reason About Random Samples; Lesson 24: Compare Populations **Math in Action:** pp. 525–533
7.SP.6	Use a random sampling of a population to draw valid inferences and generalizations of populations.	**Lesson 23**: Reason About Random Samples **Supporting Content**: Lesson 22: Understand Random Sampling **Math in Action:** pp. 525–533

2023 Arkansas Mathematics Standards Grade 7		i-Ready Classroom Mathematics ©2024 Grade 7
	Probability	
	Students understand theoretical and experimental probability for simple experiments.	
7.SP.7	Determine the sample space of a simple experiment and use the sample space to determine the theoretical probability of a given set of outcomes. • Simple experiments include: tossing a fair coin, spinning a fair spinner, rolling a fair dice, picking a random marble from a bag, and selecting a random card from a deck	**Lesson 32:** Solve Problems Involving Probability Models **Supporting Content:** Lesson 33: Solve Problems Involving Compound Events **Math in Action:** Probability: pp. 757–765
7.SP.8	Recognize that probabilities in a simple experiment can be qualitative descriptors of likelihood: impossible (0), unlikely, neither likely nor unlikely, likely, or certain (1).	**Lesson 30**: Understand Probability **Supporting Content:** Lesson 31: Solve Problems Involving Experimental Probability; Lesson 32: Solve Problems Involving Probability Models; Lesson 33: Solve Problems Involving Compound Events **Math in Action**: pp. 757–765
7.SP.9	Determine experimental probabilities in simple experiments and represent as fractions, decimals, and percents.	**Lesson 31:** Solve Problems Involving Experimental Probability **Supporting Content:** **Math in Action**: pp. 757–765
7.SP.10	Use theoretical probability of an event in a simple experiment to predict the number of times that an event will occur for a large number of experiments.	**Lesson 31:** Solve Problems Involving Experimental Probability **Lesson 32:** Solve Problems Involving Probability Models **Supporting Content:** Lesson 33: Solve Problems Involving Compound Events **Math in Action:** pp. 757–765

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Grade 8

2023 Arkansas Mathematics Standards Grade 8		i-Ready Classroom Mathematics ©2024 Grade 8
Grade 8		
8.NCC	**Number Concepts & Computations**	
	Rational & Irrational Numbers	
	Students understand relationships among numbers and the real number system.	
8.NCC.1	Describe relationships in the real number system (rational and irrational). • Numbers relationships to include: decimal expansion for rational and irrational numbers, square roots of nonperfect squares, and cube roots of nonperfect cubes	**Lesson 24:** Express Rational Numbers as Fractions and Decimals **Lesson 25:** Find Rational Approximations of Irrational Numbers **Supporting Content:** Lesson 23: Find Square Roots and Cube Roots to Solve Problems
8.NCC.2	Compare the size of irrational numbers and locate them on a number line by finding the rational approximations.	**Lesson 25**: Find Rational Approximations of Irrational Numbers **Supporting Content:** Lesson 27: Apply the Pythagorean Theorem; Lesson 28: Solve Problems with Volumes of Cylinders, Cones, and Spheres **Math in Action:** pp. 679–687
8.NCC.3	Know and apply the properties of integer exponents to generate equivalent numerical expressions.	**Lesson 19**: Apply Exponent Properties for Positive Integer Exponents **Lesson 20:** Apply Exponent Properties for All Integer Exponents **Supporting Content:** Lesson 21: Express Numbers Using Integer Powers of 10; Lesson 22: Work with Scientific Notation **Math in Action:** pp. 541–549
8.NCC.4	Write very large and very small numbers in scientific notation using positive and negative exponents.	**Lesson 21:** Express Numbers Using Integer Powers of 10 **Supporting Content:** Lesson 22: Work with Scientific Notation **Math in Action:** pp. 541–549

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8.NCC.5	Compare numbers written in scientific notation to determine how many times larger or smaller one number is than the other, using real-world and mathematical problems.	**Lesson 21:** Express Numbers Using Integer Powers of 10 **Supporting Content:** Lesson 22: Work with Scientific Notation **Math in Action:** pp. 541–549
8.NCC.6	Solve real-world and mathematical problems by performing operations with numbers written in standard and scientific notation.	**Lesson 22**: Work with Scientific Notation **Supporting Content:** Lesson 21: Express Numbers Using Integer Powers of 10 **Math in Action:** pp. 541–549
	Rational Number Operations	
	Students work with square and cube roots.	
8.NCC.7	Solve equations in the form of $x^2 = p$ or $x^3 = p$ where p is a positive rational number.	**Lesson 23:** Find Square Roots and Cube Roots to Solve Problems **Supporting Content**: Lesson 26: Understand the Pythagorean Theorem and Its Converse; Lesson 27: Apply the Pythagorean Theorem **Math in Action**: pp. 679–687
8.NCC.8	Evaluate square roots of perfect squares and cube roots of perfect cubes.	**Lesson 23:** Find Square Roots and Cube Roots to Solve Problems **Supporting Content**: Lesson 26: Understand the Pythagorean Theorem and Its Converse; Lesson 27: Apply the Pythagorean Theorem **Math in Action**: pp. 679–687

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8.FN	**Functions**	
	Proportional & Linear Relationships	
	Students understand slope using previous learning of proportional relationships.	
8.FN.1	Graph proportional relationships, interpreting the unit rate as the slope of the graph.	**Lesson 8**: Graph Proportional Relationships and Define Slope **Supporting Content:** Lesson 9: Derive and Graph Linear Equations of the Form y = mx + b **Math in Action**: pp. 331–339
8.FN.2	Explain, using similar right triangles, how the slope of a line is the same between two points on a non-vertical line or non-horizontal line. • Slope includes: positive, negative, horizontal (zero), and vertical (undefined)	**Lesson 8**: Graph Proportional Relationships and Define Slope **Supporting Content:** Lesson 15: Understand Functions; Lesson 16: Use Functions to Model Linear Relationships
	Functions	
	Students understand that a function is a rule that assigns each input exactly one output.	
8.FN.3	Determine whether a relation is a function or not when given a function map, table, graph, equation, or set of ordered pairs.	**Lesson 15**: Understand Functions **Supporting Content:** Lesson 17: Compare Different Representations of Functions **Math in Action**: pp. 431–439
8.FN.4	Compare the rate of change (slope) and y-intercept (initial value) of two linear functions each represented in different forms. • Functions are represented algebraically, graphically, numerically in tables, or by verbal descriptions.	**Lesson 17**: Compare Different Representations of Functions **Supporting Content:** Lesson 16: Use Functions to Model Linear Relationships **Math in Action:** pp. 431–439

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8.FN.5	Distinguish between linear and nonlinear functions by comparing graphs and equations.	**Lesson 15:** Understand Functions **Supporting Content:** Lesson 9: Derive and Graph Linear Equations of the Form y = mx + b; Lesson 16: Use Functions to Model Linear Relationships; Lesson 17: Compare Different Representations of Functions; Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data **Math in Action:** pp. 431–439
8.FN.6	Determine the rate of change (slope) and y-intercept (initial value) from tables, graphs, equations, and verbal descriptions of linear relationships.	**Lesson 16**: Use Functions to Model Linear Relationships **Supporting Content**: Lesson 12: Understand Systems of Linear Equations in Two Variables; Lesson 13: Solve Systems of Linear Equations Algebraically; Lesson 14: Represent and Solve Problems with Systems of Linear Equations; Lesson 17: Compare Different Representations of Functions; Lesson 18: Analyze Functional Relationships Qualitatively; Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data **Math in Action:** pp. 431–439
8.FN.7	Interpret and explain the meaning of the rate of change (slope) and y-intercept (initial value) of a linear relationship in a real-world context.	**Lesson 16**: Use Functions to Model Linear Relationships **Supporting Content**: Lesson 12: Understand Systems of Linear Equations in Two Variables; Lesson 13: Solve Systems of Linear Equations Algebraically; Lesson 14: Represent and Solve Problems with Systems of Linear Equations; Lesson 17: Compare Different Representations of Functions; Lesson 18: Analyze Functional Relationships Qualitatively; Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data **Math in Action:** pp. 431–439

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8.FN.8	Analyze a graph by describing the functional relationships between two quantities.	**Lesson 18:** Analyze Functional Relationships Qualitatively **Supporting Content:** Lesson 16: Use Functions to Model Linear Relationships; Lesson 17: Compare Different Representations of Functions; Lesson 29: Analyze Scatter Plots and Fit a Linear Model to Data **Math in Action:** pp. 431–439
8.FN.9	Sketch a graph that exhibits qualitative features of a function described verbally.	**Lesson 18:** Analyze Functional Relationships Qualitatively **Supporting Content:** Lesson 16: Use Functions to Model Linear Relationships; Lesson 17: Compare Different Representations of Functions; Lesson 29: Analyze Scatter Plots and Fit a Linear Model to Data **Math in Action:** pp. 431–439
8.ALG	**Algebra**	
	Equations & Inequalities	
	Students solve linear equations and inequalities.	
8.ALG.1	Analyze and solve one-variable linear equations with rational coefficients containing solutions with one, zero, or infinitely many solutions.	**Lesson 10:** Solve Linear Equations in One Variable **Lesson 11**: Determine the Number of Solutions to One-Variable Equations **Supporting Content:** Lesson 9: Derive and Graph Linear Equations of the Form y = mx + b; Lesson 12: Understand Systems of Linear Equations in Two Variables; Lesson 13: Solve Systems of Linear Equations Algebraically; Lesson 14: Represent and Solve Problems with Systems of Linear Equations **Math in Action:** pp. 331–339
8.ALG.2	Analyze and solve one-variable linear inequalities with rational coefficients.	*This standard is not addressed in iReady Classroom Mathematics.*

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	Systems of Equations	
	Students will solve systems of equations.	
8.ALG.3	Analyze and solve systems of linear equations in the form $y = mx + b$ in real-world or mathematical contexts, graphically and algebraically.	**Lesson 12**: Understand Systems of Linear Equations in Two Variables **Lesson 13**: Solve Systems of Linear Equations Algebraically **Lesson 14**: Represent and Solve Problems with Systems of Linear Equations **Supporting Content:** **Math in Action:** pp. 331–339
8.GM	**Geometry & Measurement**	
	Area, Volume, & Surface Area	
	Students solve problems involving area, volume, and surface area.	
8.GM.1	Apply the formulas for the volume and surface area of cylinders, cones, and spheres to solve real-world and mathematical problems.	**Lesson 28:** Solve Problems with Volumes of Cylinders, Cones, and Spheres **Supporting Content**: **Math in Action**: pp. 679–687 *Note: The lesson cited does not include surface area.*
	Cross Sections	
	Students describe cross sections of three-dimensional figures.	
8.GM.2	Describe the two-dimensional figure that results from slicing a three-dimensional figure parallel and perpendicular to the base. • Three-dimensional figures include: pyramids, cones, and spheres	**See Grade 7:** **Lesson 27**: Describe Plane Sections of Three-Dimensional Figures *Note: The lesson cited does not include cones or spheres.*
	Pythagorean Theorem	
	Students explore right triangles and apply the Pythagorean Theorem.	
8.GM.3	Model or explain an informal proof of the Pythagorean Theorem and its converse.	**Lesson 26**: Understand the Pythagorean Theorem and Its Converse **Supporting Content**: Lesson 27: Apply the Pythagorean Theorem

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8.GM.4	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles.	**Lesson 27:** Apply the Pythagorean Theorem **Supporting Content:** Lesson 28: Solve Problems with Volumes of Cylinders, Cones, and Spheres **Math in Action:** pp. 679–687
8.GM.5	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	**Lesson 27:** Apply the Pythagorean Theorem
	Transformations & Congruence on a Coordinate Plane	
	Students use concrete models, diagrams, or geometry to understand congruence and similarity.	
8.GM.6	Given a figure, draw a congruent figure on a coordinate plane resulting from a rotation, reflection, or translation.	**Lesson 1**: Understand Rigid Transformations and Their Properties **Supporting Content:** Lesson 2: Work with Single Rigid Transformations in the Coordinate Plane; Lesson 3: Work with Sequences of Transformations and Congruence **Math in Action**: pp. 65–73
8.GM.7	Identify a single transformation used to transform one figure onto another on a coordinate plane. • Rotations include: 90°, 180°, and 270°	**Lesson 1**: Understand Rigid Transformations and Their Properties **Supporting Content:** Lesson 2: Work with Single Rigid Transformations in the Coordinate Plane; Lesson 3: Work with Sequences of Transformations and Congruence **Math in Action**: pp. 65–73
8.GM.8	Given two congruent figures, describe a sequence of transformations that maps one figure to another.	**Lesson 3:** Work with Sequences of Transformations and Congruence **Supporting Content:** Lesson 1: Understand Rigid Transformations and Their Properties; Lesson 2: Work with Single Rigid Transformations in the Coordinate Plane **Math in Action**: pp. 65–73

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8.GM.9	Perform a given sequence of transformations of a figure on the coordinate plane, including rotations, reflections, translations, and dilations. • Rotations include: 90°, 180°, and 270°	**Lesson 3:** Work with Sequences of Transformations and Congruence **Supporting Content:** Lesson 1: Understand Rigid Transformations and Their Properties; Lesson 2: Work with Single Rigid Transformations in the Coordinate Plane **Math in Action**: pp. 65–73
8.GM.10	Describe the effects of rotations, reflections, translations, and dilations on two-dimensional figures using coordinates. • Rotations include: 90°, 180°, and 270°	**Lesson 2:** Work with Single Rigid Transformations in the Coordinate Plane **Lesson 3:** Work with Sequences of Transformations and Congruence **Lesson 5:** Perform and Describe Transformations Involving Dilations **Supporting Content:** **Math in Action**: pp. 65–73, 159–167
8.GM.11	Given two similar two-dimensional figures, describe a sequence of transformations that exhibits similarity, including rotations, reflections, translations, and dilations.	**Lesson 4**: Understand Dilations and Similarity **Lesson 5**: Perform and Describe Transformations Involving Dilations **Supporting Content:** Lesson 7: Describe Angle Relationships in Triangles; Lesson 8: Graph Proportional Relationships and Define Slope **Math in Action:** pp. 159–167
8.SP	**Statistics & Probability**	
	Bivariate Data	
	Students investigate patterns of association to bivariate data.	
8.SP.1	Construct scatter plots using bivariate data; determine if the data displays a linear or nonlinear pattern and positive, negative, or no association.	**Lesson 29:** Analyze Scatter Plots and Fit a Linear Model to Data **Supporting Content**: Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data **Math in Action:** pp. 779–787

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8.SP.2	Construct straight lines to approximately fit data displaying a linear association when presented in scatter plots.	**Lesson 29:** Analyze Scatter Plots and Fit a Linear Model to Data **Supporting Content**: Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data **Math in Action**: pp. 779–787
8.SP.3	Construct and interpret a relative frequency table, using data from two categorical variables collected from the same subject.	**Lesson 31**: Understand Two-Way Tables **Lesson 32**: Construct and Interpret Two-Way Tables **Supporting Content**: **Math in Action**: pp. 779–787
	Probability	
	Students understand theoretical and experimental probability for compound experiments using organized lists, tables, or tree diagrams.	
8.SP.4	Determine the sample space and use the sample space to determine the theoretical probability of a given set of outcomes for compound experiments, using organized lists, tables, or tree diagrams. • Compound experiments include a combination of two different experiments.	**See Grade 7:** **Lesson 33**: Solve Problems Involving Compound Events
8.SP.5	Determine theoretical and experimental probabilities of compound experiments.	**See Grade 7:** **Lesson 33**: Solve Problems Involving Compound Events
8.SP.6	Use theoretical probability of an event in a compound experiment to predict the number of times that event will occur for a large number of experiments.	**See Grade 7:** **Lesson 33**: Solve Problems Involving Compound Events