Khan Academy 6th Grade Math Course & Pacing Guide

Course Overview

In this course, students explore the full range of 6th-grade math concepts through a balance of conceptual understanding, procedural fluency, and real-world application. They begin with foundational ratio reasoning, rates, and percentages, using visual models and multiple representations to deepen understanding. As they progress, students build fluency with rational numbers—including decimals, fractions, and negative numbers—and apply this knowledge to meaningful problems.

Students develop algebraic thinking by working with expressions, equations, and inequalities. Geometry units emphasize area, surface area, and volume using spatial reasoning, formulas, and decomposition strategies. Students explore the coordinate plane to solve problems involving distance, shape, and position.

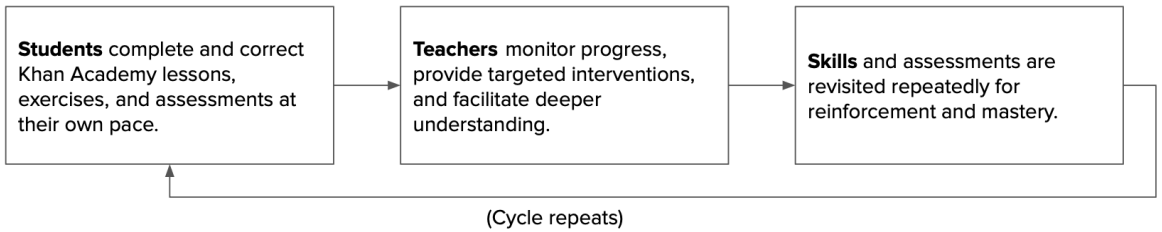
The course concludes with an in-depth study of statistics, where students collect, represent, and analyze data using dot plots, histograms, box plots, and summary statistics such as mean, median, interquartile range, and mean absolute deviation. Throughout all units, students engage in reasoning, modeling, and problem-solving, establishing a strong foundation for future mathematical learning.

Instructional Model

Khan Academy is the primary instructional tool for this course, allowing students to progress at their own pace within a mastery-based system. Lessons include embedded formative assessments—quizzes and unit tests—that students may complete when they feel ready. Proctored unit tests contribute to final mastery levels. Teachers monitor progress closely, using assessment data to guide instruction, provide feedback, and offer reteaching, targeted interventions, or enrichment. Students may retake assessments as needed to demonstrate mastery and continue their learning journey.

Mastery Goals:

- **Skill Mastery:** Proficient at minimum.
- **Quiz/Unit Mastery:** Aim for 90% or higher.
- **Course Mastery:** Target 90% overall by year's end.



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How to Use This Guide

Teachers can use this guide to support personalized learning, organize small-group instruction, or structure whole-class lessons. Students can use it to set weekly goals and track their progress toward mastery. It offers a flexible framework, suggesting approximately 3–5 skills or 3–4% of course progress per week, though actual pacing may vary based on individual or classroom needs.

Each unit includes:

- Week-by-week priority skills
- Aligned Khan Academy lessons and assessments
- Optional reteaching and enrichment resources
- Recommended pacing for core instruction, practice, and deeper learning experiences

Pacing	Weekly Focus	Khan Academy Mastery	Targeted Support	Deeper Learning
Week 4	*The student will be able to:* • Add and subtract multi-digit decimals using the standard algorithm. • Solve real-world problems involving the addition and subtraction of decimals.	Lessons and Exercises: • Adding decimals (1 skill) • Subtracting decimals (1 skill) • Adding and subtracting decimals word problems (1 skill) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Adding and subtracting decimals with diagrams • CK-12: Adding and subtracting decimals with the standard method	Guided Conceptual Exploration: • IM: Adding and subtracting decimals with few non-zero digits • IM: Adding and subtracting decimals with many non-zero digits

Differentiation Strategies

For Students on Pace or Ahead

- Begin upcoming content early.
- Engage in Illustrative Mathematics (IM) tasks from the Deeper Learning section. These promote deeper conceptual understanding through discussion and collaboration, ideally facilitated by a teacher.
- Use flex weeks periodically for enrichment, project-based tasks, or concept application.
- Support peers, reflect on learning, or revisit earlier work to strengthen foundational skills.

For Students Needing Additional Support

- Access CK-12 lessons from the Targeted Support section for alternative explanations, interactive examples, and targeted practice.
- Participate in small-group or individualized instruction to address specific gaps or misconceptions.
- Use flex weeks periodically for reteaching, targeted review, or catching up on missed content.

Have a suggestion, resource, or question? We're always looking for ways to make our resources more helpful! Share your feedback at contact@khanschoolsnetwork.org.

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Khan Academy 6th Grade Math Course Map (11 units, 148 skills)						
Quick Link	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Topic (Khan Academy)	Ratios	Arithmetic with rational numbers	Rates and percentages	Exponents and order of operations	Negative numbers	Variables & expressions
Suggested Pacing	3 weeks	4 weeks	3 weeks	2 weeks	3 weeks	3-4 weeks
Unit Components	14 skills, 3 quizzes, 1 unit test	16 skills, 3 quizzes, 1 unit test	10 skills, 3 quizzes, 1 unit test	6 skills, 2 quizzes, 1 unit test	16 skills, 3 quizzes, 1 unit test	18 skills, 3 quizzes, 1 unit test
Aligned Standards	6.RP.A.1, 6.RP.A.3	5.NBT.B.6, 6.NS.A.1, 6.NS.B.2, 6.NS.B.3	6.RP.A.2, 6.RP.A.3	6.EE.A.1, 6.EE.A.2	6.NS.C.5, 6.NS.C.6, 6.NS.C.7	6.EE.A.1, 6.EE.A.2, 6.EE.A.3, 6.EE.A.4, 6.EE.B.6, 6.NS.B.4
Quick Link	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Note
Topic (Khan Academy)	Equations & inequalities	Plane figures	Coordinate plane	3D figures	Data and statistics	This course is designed to be completed in **31-33 weeks**, depending on each student's pace and understanding, with the flexibility to finish sooner if mastery is achieved more quickly.
Suggested Pacing	4 weeks	1-2 weeks	2 weeks	2 weeks	4 weeks	
Unit Components	22 skills, 4 quizzes, 1 unit test	8 skills, 1 unit test	7 skills, 2 quizzes, 1 unit test	10 skills, 2 quizzes, 1 unit test	21 skills, 4 quizzes, 1 unit test	
Aligned Standards	6.EE.A.2, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.EE.B.8, 6.EE.C.9	6.G.A.1	6.NS.C.6, 6.NS.C.8, 6.G.A.3	6.G.A.2, 6.G.A.4	6.SP.A.1, 6.SP.A.2, 6.SP.A.3, 6.SP.B.4, 6.SP.B.5, HSS.ID.A.1	

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Unit 1: Ratios (3 weeks, 14 skills)				
About This Unit: In this unit, students explore the foundational concept of ratios and how they describe relationships between quantities. They learn to represent ratios using tape diagrams, double number lines, and ratio tables, building a strong visual and conceptual understanding. As the unit progresses, students deepen their knowledge by working with equivalent ratios, solving real-world problems, and using ratio reasoning to make comparisons. They apply their skills by plotting ratios on a coordinate plane, working with units of measurement, and analyzing part-part-whole relationships. This unit emphasizes both conceptual understanding and practical application, helping students see how ratios are used in everyday situations.				
Unit Focus: Intro to ratios, Visualize equivalent ratios, Equivalent ratios, Ratio application				
Standards Addressed: 6.RP.A.1, 6.RP.A.3, 6.RP.A.3.a, 6.RP.A.3.b, 6.RP.A.3.d				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 1	*The student will be able to:* • Understand ratios as comparisons between two or more quantities. • Represent ratios using tape diagrams, double number lines, and simple visuals. • Identify and describe equivalent ratios using visual and numerical models. • Relate double number lines to ratio tables and use both to explore ratio relationships.	Lessons and Exercises: • Intro to ratios (1 skill) • Visualize equivalent ratios (5 skills) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Introducing ratios • CK-12: Pictures of ratios • CK-12: Equivalent ratios & tape diagrams • CK-12: Double number lines & equivalent ratios	Guided Conceptual Exploration: • IM: Introducing ratios and ratio language • IM: Introducing double number line diagrams • IM: Creating double number line diagrams
Week 2	*The student will be able to:* • Use ratio tables to generate and extend equivalent ratios. • Solve real-world and	Lessons and Exercises: • Equivalent ratios (5 skills)	Interactive Digital Textbook: • CK-12: Completing tables of equivalent ratios • CK-12: Constructing tables	Guided Conceptual Exploration: • IM: Representing ratios with tables

	mathematical problems involving equivalent ratios. • Interpret and analyze ratio relationships in context.	Assessments: • Quiz 2	of equivalent ratios	• IM: Navigating a table of equivalent ratios • IM: Solving equivalent ratio problems
Week 3	*The student will be able to:* • Apply ratio reasoning to solve real-world problems with measurement and comparison. • Plot ratios as points on the coordinate plane and describe patterns. • Analyze part-part-whole relationships using ratio models and reasoning. • Solve complex ratio problems involving units, scale, and logical estimation.	Lessons and Exercises: • Ratio application (3 skills) Assessments: • Quiz 3 • Unit test	Interactive Digital Textbook: • CK-12: Comparing ratios with tables • CK-12: Pictures of part-part-whole ratios • CK-12: Part-part-whole ratios with tape diagrams	Guided Conceptual Exploration: • IM: Part-part-whole ratios • IM: Solving more ratio problems • IM: A Fermi Problem
Unit 2: Arithmetic with rational numbers (4 weeks, 16 skills)				
About This Unit: In this unit, students develop fluency with operations involving decimals and fractions, using both models and standard algorithms to build deep understanding. They begin by mastering addition and subtraction of multi-digit decimals, applying their skills to solve real-world problems. Students then explore fraction division—starting with dividing whole numbers by fractions and vice versa—using visual models and equations to make sense of the process. As they progress, they learn to divide fractions by fractions and mixed numbers, connecting these skills to part-to-whole situations in everyday contexts. The unit concludes with multiplying multi-digit decimals and dividing whole numbers and decimals, including interpreting decimal quotients in meaningful ways. Throughout the unit, students focus on both procedural accuracy and real-world application.				
Unit Focus: Adding decimals, Subtracting decimals, Adding and subtracting decimals word problems, Dividing fractions and whole numbers, Dividing fractions by fractions, Multiplying decimals, Dividing whole numbers, Dividing decimals				
Standards Addressed: 5.NBT.B.6, 6.NS.A.1, 6.NS.B.2, 6.NS.B.3				

Pacing	Weekly Focus	Khan Academy Mastery	Targeted Support	Deeper Learning
Week 4	*The student will be able to:* • Add and subtract multi-digit decimals using the standard algorithm. • Solve real-world problems involving the addition and subtraction of decimals.	Lessons and Exercises: • Adding decimals (1 skill) • Subtracting decimals (1 skill) • Adding and subtracting decimals word problems (1 skill) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Adding and subtracting decimals with diagrams • CK-12: Adding and subtracting decimals with the standard method	Guided Conceptual Exploration: • IM: Adding and subtracting decimals with few non-zero digits • IM: Adding and subtracting decimals with many non-zero digits
Week 5	*The student will be able to:* • Divide fractions by whole numbers and whole numbers by fractions using models and equations. • Divide fractions by fractions using models and the standard algorithm. • Divide mixed numbers and interpret results in context. • Apply fraction division to solve real-world problems involving part-to-whole relationships.	Lessons and Exercises: • Dividing fractions and whole numbers (2 skills) • Dividing fractions by fractions (4 skills) Assessments: • Quiz 2	Interactive Digital Textbook: • CK-12: Dividing a fraction by a whole number • CK-12: Dividing a whole number by a fraction • CK-12: Dividing fractions with diagrams • CK-12: Dividing fractions with the standard method	Guided Conceptual Exploration: • IM: Dividing by unit and non-unit fractions • IM: Using an algorithm to divide fractions • IM: How much in each group? (Part 2)
Week 6	*The student will be able to:* • Multiply multi-digit decimals using the standard algorithm and interpret the product.	Lessons and Exercises: • Multiplying decimals (2 skills) • Dividing whole numbers (2	Interactive Digital Textbook: • CK-12: Multiplying decimals with diagrams • CK-12: Multiplying decimals	Guided Conceptual Exploration: • IM: Methods for multiplying decimals

	• Divide multi-digit whole numbers using the standard algorithm.	skills)	with the standard method • IM: Using the partial quotients method • CK-12: Long division	• IM: Calculating products of decimals • IM: Using long division
Week 7	*The student will be able to:* • Divide whole numbers to produce decimal quotients. • Divide decimals by whole numbers and other decimals.	Lessons and Exercises: • Dividing decimals (3 skills) Assessments: • Quiz 3 • Unit test	Interactive Digital Textbook: • CK-12: Dividing decimals in diagrams • CK-12: Decimals divided by decimals	Guided Conceptual Exploration: • IM: Dividing decimals by whole numbers • IM: Dividing decimals by decimals

Unit 3: Rates and percentages (3 weeks, 10 skills)

About This Unit: In this unit, students explore the concepts of rates and percents and how they help us compare quantities in meaningful ways. They begin by understanding and solving rate and unit rate problems, including real-world contexts like unit pricing and constant speed, using tables and equations to support their reasoning. From there, students build a deep understanding of percents as rates per 100 and use visual models—such as double number lines and tape diagrams—to represent and solve percent problems. They connect percents to fractions and decimals and learn to move fluently between these forms. Finally, students apply their knowledge to solve real-world percent problems, using strategies like equations, tables, and mental math to make sense of everyday situations involving part, whole, and percent.

Unit Focus: Intro to rates, Intro to percents, Visualize percents, Equivalent representations of percent problems, Percent problems, Percent word problems

Standards Addressed: 6.RP.A.2, 6.RP.A.3, 6.RP.A.3.a, 6.RP.A.3.b, 6.RP.A.3.c

Pacing	Weekly Focus	Khan Academy Mastery	Targeted Support	Deeper Learning
Week 8	*The student will be able to:* • Understand and solve rate and unit rate problems involving two different units.	Lessons and Exercises: • Intro to rates (3 skills)	Interactive Digital Textbook: • CK-12: Rates • CK-12: Unit Rates	Guided Conceptual Exploration: • IM: Measuring with Different-Sized Units

	• Use tables or equations to solve and compare rate problems, including unit pricing.	Assessments: • Quiz 1	• CK-12: Price Unit Rates	• IM: Converting Units • IM: Comparing Speeds and Prices • IM: Interpreting Rates • IM: Solving Rate Problems
Week 9	*The student will be able to:* • Understand percents as rates per 100 and represent them using models, including percents over 100. • Use double number lines and tape diagrams to visualize and solve percent problems. • Find a percent of a whole and find the whole given a percent using visual and numerical strategies.	Lessons and Exercises: • Intro to percents (2 skills) • Visualize percents (1 skill) Assessments: • Quiz 2	Interactive Digital Textbook: • CK-12: Introducing Percentages • CK-12: Percentages with Tape Diagrams • CK-12: Percentages with Double Number Lines • CK-12: Percentage of an Amount • CK-12: Percent and a Part to Find the Whole	Guided Conceptual Exploration: • IM: What Are Percentages? • IM: Percentages and Double Number Lines • IM: Percentages and Tape Diagrams • IM: Benchmark Percentages • IM: Finding This Percent of That • IM: Finding the Percentage
Week 10	*The student will be able to:* • Convert between percents, fractions, and decimals using models and reasoning. • Recognize and generate equivalent representations of percents in multiple forms. • Solve problems that involve finding a percent of a number. • Interpret and solve percent word problems involving real-world contexts.	Lessons and Exercises: • Equivalent representations of percent problems (2 skills) • Percent problems (1 skill) • Percent word problems (1 skill) Assessments: • Quiz 3 • Unit test		Guided Conceptual Exploration: • IM: Solving Percentage Problems

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Unit 4: Exponents and order of operations (2 weeks, 6 skills)				
About This Unit: In this unit, students build a foundational understanding of exponents and apply that knowledge within multi-step expressions. They begin by learning how exponents represent repeated multiplication, then evaluate expressions involving whole numbers, fractions, and decimals raised to powers—including special cases like powers of 10 and the zeroth power. As they progress, students apply the order of operations (PEMDAS), including expressions with exponents and rational numbers. Through strategic problem-solving and careful reasoning, students develop fluency with evaluating numerical expressions and deepen their understanding of mathematical structure and precision.				
Unit Focus: Meaning of exponents, Powers of whole numbers, Powers of fractions and decimals, Order of operations introduction, More on order of operations				
Standards Addressed: 6.EE.A.1, 6.EE.A.2, 6.EE.A.2.c				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 11	*The student will be able to:* • Understand exponents as a way to represent repeated multiplication. • Evaluate numerical expressions with whole-number exponents, including powers of whole numbers, fractions, and decimals. • Explain and apply special exponent cases, such as the zeroth power and powers of 10.	Lessons and Exercises: • Meaning of exponents (1 skill) • Powers of whole numbers (1 skill) • Powers of fractions and decimals (1 skill) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Expressions • CK-12: Using Exponents • CK-12: Expressions with Exponents	Guided Conceptual Exploration: • IM: Meaning of Exponents • IM: Expressions with Exponents • IM: Evaluating Expressions with Exponents
Week 12	*The student will be able to:* • Evaluate numerical expressions using the order of operations, including those with exponents. • Apply the order of operations to expressions involving fractions,	Lessons and Exercises: • Order of operations introduction (1 skill) • More on order of operations (2 skills)	Interactive Digital Textbook: • CK-12: Order of Operations	

	decimals, and exponent notation.	Assessments: • Quiz 2 • Unit test		
Unit 5: Negative numbers (3 weeks, 16 skills)				
About This Unit: In this unit, students deepen their understanding of rational numbers by exploring their meaning, representation, and use in both real-world and mathematical contexts. They begin by identifying negative numbers and their opposites in relation to zero, then move on to locating and comparing rational numbers—including fractions and decimals—on a number line using inequality symbols. Building on this foundation, students learn to order rational numbers based on their position and distance from zero, leading to a more nuanced understanding of magnitude. The unit concludes with an exploration of absolute value, both as a mathematical concept and as a tool for interpreting quantities in context. Throughout, students apply number sense, visual models, and reasoning strategies to build fluency with rational numbers and their applications.				
Unit Focus: Intro to negative numbers, Negative symbol as opposite, Rational numbers on the number line, Comparing negative numbers, Ordering rational numbers, Intro to absolute value, Comparing absolute values				
Standards Addressed: 6.NS.C.5, 6.NS.C.6, 6.NS.C.6.a, 6.NS.C.6.c, 6.NS.C.7				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 13	*The student will be able to:* • Understand that negative numbers represent values less than zero and can describe quantities in real-world contexts. • Locate and label positive and negative numbers on a number line. • Interpret the negative symbol as indicating a value opposite in direction or position. • Identify and describe opposites of numbers and their positions	Lessons and Exercises: • Intro to negative numbers (2 skills) • Negative symbol as opposite (2 skills) • Rational numbers on the number line (2 skills) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Positives and Negatives • CK-12: Rational Number Line • CK-12: Points on the Number Line • CK-12: Symmetry on the Number Line	Guided Conceptual Exploration: • IM: Positive and Negative Numbers • IM: Points on the Number Line

	relative to zero. • Locate and represent rational numbers—including negative decimals and fractions—on a number line.			
Week 14	*The student will be able to:* • Compare rational numbers using number lines, symbols, and reasoning about value. • Write and interpret inequalities to compare rational numbers in context. • Order rational numbers, including negatives, by comparing their positions on a number line.	Lessons and Exercises: • Comparing negative numbers (3 skills) • Ordering rational numbers (2 skills) Assessments: • Quiz 2	Interactive Digital Textbook: • CK-12: Compare Rational Numbers on a Number Line • CK-12: Comparing with an Unknown	Guided Conceptual Exploration: • IM: Comparing Positive and Negative Numbers • IM: Writing and Graphing Inequalities
Week 15	*The student will be able to:* • Justify the order of numbers using their relative values and distances from zero. • Understand absolute value as the distance from zero and interpret it in context. • Compare and order absolute values on a number line. • Interpret absolute value in real-world contexts, including when comparisons may or may not reflect actual magnitudes. • Reason about the meaning of absolute value inequalities and justify solutions.	Lessons and Exercises: • Intro to absolute value (2 skills) • Comparing absolute values (3 skills) Assessments: • Quiz 3 • Unit test	Interactive Digital Textbook: • CK-12: Absolute Value on Number Line • CK-12: Comparing Absolute Values	Guided Conceptual Exploration: • IM: Ordering Rational Numbers • IM: Absolute Value of Numbers • IM: Comparing Numbers and Distance from Zero • IM: Interpreting Inequalities

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Unit 6: Variables & expressions (3-4 weeks, 18 skills)				
About This Unit: In this unit, students build a foundational understanding of algebraic expressions and the properties that govern them. They identify parts of expressions, apply properties of operations, and substitute values—including fractions, decimals, and exponents—into expressions to evaluate them. Students write expressions to represent real-world situations, use greatest common factor and least common multiple in problem solving, and apply the distributive property to generate equivalent expressions. The unit concludes with students combining like terms and reasoning about structure to simplify and justify equivalent expressions.				
Unit Focus: Properties of numbers, Whole numbers & integers, Parts of algebraic expressions, Substitution & evaluating expressions, Evaluating expressions with multiple variables, Expression value intuition, Evaluating expressions word problems, Writing algebraic expressions introduction, Writing basic algebraic expressions word problems, Least common multiple, Greatest common factor, Distributive property with variables, Combining like terms, Equivalent expressions				
Standards Addressed: 6.EE.A.1, 6.EE.A.2, 6.EE.A.3, 6.EE.A.4, 6.EE.B.6, 6.NS.B.4				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 16	*The student will be able to:* • Identify and describe properties of operations and understand the relationship between whole numbers and integers. • Recognize and describe parts of algebraic expressions, including terms, factors, coefficients, and variables. • Substitute values into expressions and accurately evaluate them, including those with exponents. • Substitute values into expressions with one or more variables and evaluate the result. • Reason about how different	Lessons and Exercises: • Properties of numbers • Whole numbers & integers • Parts of algebraic expressions (1 skill) • Substitution and evaluating expressions (2 skills) • Evaluating expressions with multiple variables (2 skills) • Expression value intuition (1 skill) • Evaluating expressions word problems (1 skill)	Interactive Digital Textbook: • CK-12: Unknown Values • CK-12: Letters Stand for Numbers • CK-12: Expressions with Variables • CK-12: Evaluating Expressions	

	values affect an expression's outcome, including fractions, decimals, and exponents. • Apply understanding of variable expressions to solve real-world problems and interpret the meaning of solutions.	Assessments: • Quiz 1		
Week 17	*The student will be able to:* • Write basic algebraic expressions to represent mathematical situations or real-world scenarios. • Translate verbal descriptions into expressions using variables, operations, and parentheses. • Represent real-world problems with algebraic expressions, including those involving multiple steps. • Determine the least common multiple (LCM) and greatest common factor (GCF) of given numbers and apply them to real-world problems.	Lessons and Exercises: • Writing algebraic expressions introduction (2 skills) • Writing basic algebraic expressions word problems (1 skill) • Least common multiple (1 skill) • Greatest common factor (2 skills) Assessments: • Quiz 2	Interactive Digital Textbook: • CK-12: Using Least Common Multiple • CK-12: Using Greatest Common Factor	Guided Conceptual Exploration: • IM: Writing Expressions Where Letters Stand for Numbers
Week 18	*The student will be able to:* • Apply the distributive property to factor and simplify numerical and algebraic expressions. • Identify and generate equivalent expressions using the distributive property, with and without variables.	Lessons and Exercises: • Distributive property with variables (3 skills) • Combining like terms (1 skill) • Equivalent expressions (1 skill)	Interactive Digital Textbook: • CK-12: Distributive Property • CK-12: Rewriting Expressions Using the Distributive Property • CK-12: Combining Like Terms • CK-12: Equivalent	Guided Conceptual Exploration: • IM: The Distributive Property (Part 1) • IM: The Distributive Property (Part 2) • IM: The Distributive Property (Part 3)

	• Combine like terms to simplify algebraic expressions. • Generate and justify equivalent expressions using structure and reasoning.	Assessments: • Quiz 3 • Unit test	Expressions Within a Context	• IM: Combining Like Terms (Part 1) • IM: Combining Like Terms (Part 2) • IM: Combining Like Terms (Part 3) • IM: Equal and Equivalent
Unit 7: Equations & inequalities (4 weeks, 22 skills)				
About This Unit: In this unit, students build a foundational understanding of algebra by exploring the relationships between variables, expressions, equations, and inequalities. They begin by using visual models like tape and hanger diagrams to represent equations and deepen their understanding of equality and balance. As they progress, students solve one-step equations involving all four operations—including those with fractions and decimals—using reasoning and intuitive strategies. They also learn to translate real-world situations into equations and inequalities, test possible solutions, and interpret their meanings in context. Students extend their thinking by graphing inequalities on number lines and analyzing relationships between dependent and independent variables through equations, tables, and graphs. This unit emphasizes reasoning, multiple representations, and real-world applications to support algebraic thinking.				
Unit Focus: Algebra equations basics, One-step equations intuition, One-step addition and subtraction equations, One-step multiplication and division equations, Finding mistakes in one-step equations, One-step equation word problems, Intro to inequalities with variables, Dependent and independent variables, Analyzing relationships between variables				
Standards Addressed: 6.EE.A.2. 6.EE.A.2.b, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.EE.B.8, 6.EE.C.9				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 19	*The student will be able to:* • Understand the relationship between variables, expressions, and equations. • Test whether a given value is a solution to an equation. • Represent and reason about equations using visual models	Lessons and Exercises: • Algebra equations basics (1 skill) • One-step equations intuition (3 skills) • One-step addition and subtraction equations (2 skills)	Interactive Digital Textbook: • CK-12: Solving Equations • CK-12: Solving Addition and Subtraction Equations • CK-12: Solving Multiplication and Division Equations	Guided Conceptual Exploration: • IM: Tape Diagrams and Equations • IM: Truth and Equations • IM: Staying in Balance • IM: Practice Solving Equations and

	such as tape and hanger diagrams. • Apply the concept of equality to solve one-step equations using intuitive strategies and reasoning. • Solve one-step equations using addition, subtraction, multiplication, and division. • Solve equations with whole numbers, fractions, and decimals.	• One-step multiplication and division equations (2 skills) Assessments: • Quiz 1		Representing Situations with Equations
Week 20	*The student will be able to:* • Analyze and identify errors in one-step equation solutions and explain the reasoning behind corrections. • Translate real-world scenarios into one-step equations. • Solve one-step equation word problems and interpret the solution in context.	Lessons and Exercises: • Finding mistakes in one-step equations (1 skill) • One-step equation word problems (3 skills) Assessments: • Quiz 2		
Week 21	*The student will be able to:* • Test and identify whether a given value is a solution to a one-variable inequality. • Plot and interpret inequalities on a number line, including open and closed circles. • Match inequalities to graphs and graphs to inequalities. • Solve and model real-world problems using one-variable	Lessons and Exercises: • Intro to inequalities with variables (5 skills) Assessments: • Quiz 3	Interactive Digital Textbook: • CK-12: Inequalities with a Variable • CK-12: Inequalities on the Number Line • CK-12: Inequality Solutions	Guided Conceptual Exploration: • IM: Writing and Graphing Inequalities • IM: Solutions of Inequalities • IM: Interpreting Inequalities

	inequalities and interpret the meaning of solutions.			
Week 22	*The student will be able to:* • Identify and describe dependent and independent variables in real-world and mathematical contexts. • Represent relationships between two variables using tables, equations, and graphs. • Analyze how changes in one variable affect another using equations, graphs, and tables.	Lessons and Exercises: • Dependent and independent variables (3 skills) • Analyzing relationships between variables (2 skills) Assessments: • Quiz 4 • Unit test	Interactive Digital Textbook: • CK-12: Defining Independent and Dependent Variables • CK-12: Writing Equations • CK-12: Analyzing Relationships • CK-12: Making Tables and Graphs	Guided Conceptual Exploration: • IM: Two Related Quantities (Part 1) • IM: Two Related Quantities (Part 2) • IM: More Relationships • IM: Tables, Equations, and Graphs, Oh My!
Unit 8: Plane figures (1-2 weeks, 8 skills)				
About This Unit: In this unit, students develop a strong understanding of area by working with a variety of two-dimensional shapes. They learn to apply formulas for the area of parallelograms and triangles—including right triangles—and accurately identify the base and height needed for calculations. Building on this foundation, students explore composite figures by decomposing them into familiar shapes such as rectangles and triangles, using spatial reasoning and visual models to find total area. The unit also includes practice with quadrilaterals that have two parallel sides, as well as real-world and mathematical problems that require flexible thinking and problem-solving with area.				
Unit Focus: Areas of parallelograms, Areas of triangles, Area of composite figures				
Standards Addressed: 6.G.A.1				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 23	*The student will be able to:* • Understand and apply the formulas for the area of parallelograms and triangles,	Lessons and Exercises: • Areas of parallelograms (2 skills) • Areas of triangles (4 skills)	Interactive Digital Textbook: • CK-12: Area of Quadrilaterals	Guided Conceptual Exploration: • IM: Parallelograms • IM: Bases and Heights of

	including right triangles. • Identify and use the appropriate base and height in area calculations for both shapes. • Solve real-world and mathematical problems involving area, including finding missing side lengths when given the area.		• CK-12: Area of Triangles	Parallelograms • IM: Area of Parallelograms • IM: From Parallelograms to Triangles • IM: Area of Triangles • IM: Formula for the Area of a Triangle • IM: Bases and Heights of Triangles
Week 24	*The student will be able to:* • Find the area of composite shapes by decomposing them into familiar figures such as rectangles and triangles. • Use visual models and spatial reasoning to rearrange parts of shapes in order to calculate total area. • Calculate the area of quadrilaterals with two parallel sides using appropriate formulas.	Lessons and Exercises: • Area of composite figures (2 skills) Assessments: • Unit test	Interactive Digital Textbook: • CK-12: Break into Triangles • CK-12: Compose into Rectangles • CK-12: Area of Polygons	Guided Conceptual Exploration: • IM: Finding Area by Decomposing and Rearranging • IM: Reasoning to Find Area • IM: Polygons
Unit 9: Coordinate plane (2 weeks, 7 skills)				
About This Unit: In this unit, students explore the coordinate plane as a powerful tool for representing and solving mathematical problems. They learn to identify key parts of the plane, plot and interpret points in all four quadrants, and use coordinate reasoning to determine distances between points. Building on these skills, students draw polygons by plotting vertices, calculate side lengths, perimeters, and areas using coordinates, and apply their understanding to solve both real-world and mathematical problems involving shapes on the coordinate plane.				
Unit Focus: Four quadrants, Distance on the coordinate plane, Polygons on the coordinate plane				
Standards Addressed: 6.NS.C.6, 6.NS.C.6.b, 6.NS.C.6.c, 6.NS.C.8, 6.G.A.3				

Pacing	Weekly Focus	Khan Academy Mastery	Targeted Support	Deeper Learning
Week 25	*The student will be able to:* • Identify and label the parts of the coordinate plane, including axes and quadrants. • Plot and interpret ordered pairs in all four quadrants. • Determine locations and coordinates of points on a graph and find distances between points on the same axis. • Solve real-world and mathematical problems using reasoning with coordinates and the coordinate plane.	Lessons and Exercises: • Four quadrants (2 skills) • Distance on the coordinate plane (2 skills) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: The Four Quadrants • CK-12: Points on the Coordinate Plane • CK-12: Distance on the Coordinate Plane	Guided Conceptual Exploration: • IM: Points on the Coordinate Plane • IM: Constructing the Coordiante Plane • IM: Interpreting Points on a Coordinate Plane • IM: Distances on a Coordinate Plane
Week 26	*The student will be able to:* • Plot and label vertices to draw polygons on the coordinate plane. • Use coordinates to determine missing vertices and calculate side lengths, perimeters, and areas of polygons. • Apply coordinate geometry to solve real-world and mathematical problems involving two-dimensional shapes.	Lessons and Exercises: • Polygons on the coordinate plane (3 skills) Assessments: • Quiz 2 • Unit test	Interactive Digital Textbook: • CK-12: Drawing in the Coordinate Plane • CK-12: Shapes in the Coordinate Plane	Guided Conceptual Exploration: • IM: Shapes on the Coordinate Plane
Unit 10: 3D figures (2 weeks, 10 skills)				
About This Unit: In this unit, students explore three-dimensional figures by examining their geometric properties and visualizing how they unfold				

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into nets. They learn to identify and construct nets for common polyhedra, then use these nets to calculate surface area. By applying surface area formulas and reasoning strategies, students solve problems involving both mathematical and real-world contexts. Throughout the unit, they distinguish between surface area and volume and develop fluency in choosing and applying the appropriate concept for a given scenario.				
Unit Focus: Geometric solids (3D shapes), Volume with mini cubes, Volume with fractions, Nets of 3D figures, Surface area				
Standards Addressed: 6.G.A.2, 6.G.A.4				
Pacing	**Weekly Focus**	**Khan Academy Mastery**	**Targeted Support**	**Deeper Learning**
Week 27	*The student will be able to:* • Identify and describe attributes of common 3D shapes. • Calculate volume using unit cubes, including fractional side lengths. • Apply volume formulas for rectangular prisms with fractional dimensions. • Solve real-world and mathematical problems involving volume, including how changes in dimensions affect total volume.	Lessons and Exercises: • Geometric solids (3D shapes) (2 skills) • Volume with mini cubes • Volume with fractions (3 skills) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Polyhedra • CK-12: Volume of Prisms	Guided Conceptual Exploration: • IM: Polyhedra • IM: Volume of Right Prisms
Week 28	*The student will be able to:* • Identify and describe nets of common polyhedra and use them to visualize and construct 3D figures. • Use nets to calculate surface area of rectangular and triangular prisms. • Distinguish between surface area	Lessons and Exercises: • Nets of 3D figures (2 skills) • Surface area (3 skills) Assessments: • Quiz 2 • Unit test	Interactive Digital Textbook: • CK-12: Surface Area • CK-12: Nets	Guided Conceptual Exploration: • IM: What is Surface Area? • IM: Nets and Surface Area • IM: More Nets, More Surface Area • IM: Distinguishing Between Surface Area and Volume

	and volume and understand when to apply each concept. • Solve real-world and mathematical problems involving surface area using visual models, expressions, and reasoning.			

Unit 11: Data and statistics (4 weeks, 21 skills)

About This Unit: In this unit, students develop the skills to collect, represent, and analyze numerical data. They pose statistical questions and organize data using frequency tables, dot plots, histograms, and box plots. Students calculate and interpret measures of center—including mean and median—and reason about how changes in data affect these values. They explore variability through interquartile range (IQR) and mean absolute deviation (MAD) to better understand the spread and consistency of data. Students also compare different data displays and describe distribution shapes, identifying features like clusters, gaps, peaks, and outliers to make informed conclusions.

Unit Focus: Statistical questions, Dot plots & frequency tables, Histograms, Mean and median, Mean and median challenge problems, Interquartile range (IQR), Box plots, Mean absolute deviation (MAD), Comparing data displays, Shape of data distributions

Standards Addressed: 6.SP.A.1, 6.SP.A.2, 6.SP.A.3, 6.SP.B.4, 6.SP.B.5, HSS.ID.A.1

Pacing	Weekly Focus	Khan Academy Mastery	Targeted Support	Deeper Learning
Week 29	*The student will be able to:* • Identify and pose statistical questions that anticipate variability in data. • Create and interpret frequency tables, dot plots, and histograms to represent numerical data sets. • Analyze data representations to describe patterns, estimate centers, and make informed conclusions.	Lessons and Exercises: • Statistical questions (1 skill) • Dot plots & frequency tables (4 skills) • Histograms (2 skills) Assessments: • Quiz 1	Interactive Digital Textbook: • CK-12: Statistical Questions • CK-12: Dot Plots • CK-12: Histograms	Guided Conceptual Exploration: • IM: Statistical Questions • IM: Dot Plots • IM: Using Dot Plots to Answer Statistical Questions • IM: Interpreting Histograms • IM: Using Histogarms to Answer Statistical Questions

Week 30	*The student will be able to:* • Calculate the mean and median of numerical data sets, including those presented in various display formats (e.g., line plots, bar graphs, tables). • Solve problems involving missing values when given the mean, and reason through effects of outliers and data changes on mean and median. • Interpret the mean as a balancing point and explore how adding, removing, or changing data points affects statistical measures.	Lessons and Exercises: • Mean and median (4 skills) • Mean and median challenge problems (2 skills) Assessments: • Quiz 2	Interactive Digital Textbook: • CK-12: Mean, Median, Mode, and Range • CK-12: Measures of Center and Variability	Guided Conceptual Exploration: • IM: Interpreting the Mean as Fair Share • IM: Finding and Interpeting the Mean as the Balance Point • IM: The Median of a Data Set • IM: Comparing Mean and Median
Week 31	*The student will be able to:* • Find the interquartile range (IQR) of a data set and interpret what it tells us about the spread of the data. • Create, read, and interpret box plots, including identifying quartiles and comparing data distributions. • Understand and compute the mean absolute deviation (MAD) to analyze variability and consistency in data sets.	Lessons and Exercises: • Interquartile range (IQR) (1 skills) • Box plots (3 skills) • Mean absolute deviation (MAD) (1 skill) Assessments: • Quiz 3	Interactive Digital Textbook: • CK-12: Finding MAD • CK-12: Using MAD • CK-12: Drawing Box Plots • CK-12: Using Box Plots	Guided Conceptual Exploration: • IM: Deviation from the Mean • IM: Using Mean and MAD to Make Comparisons • IM: Quartiles and Interquartile Range • IM: Box Plots • IM: Using Box Plots
Week 32	*The student will be able to:*	Lessons and Exercises:	Interactive Digital Textbook:	Guided Conceptual

	• Compare data shown in dot plots, box plots, and histograms, identifying key similarities and differences in how data is represented. • Describe the shape of data distributions, including symmetrical, skewed, and uniform distributions. • Identify and interpret clusters, gaps, peaks, and outliers in data sets and explain what they reveal about the distribution.	• Comparing data displays (1 skill) • Shape of data distributions (2 skills) Assessments: • Quiz 4 • Unit test	• CK-12: Analyzing Data Sets Visually and Numerically • CK-12: Visually Comparing Two Data Distributions	Exploration: • IM: Using Data to Solve Problems