4th Grade Math Curriculum

In fourth grade, students will be building on their arithmetic abilities with whole numbers into the world of fractions. Fourth graders also are introduced to the standard system of measurement and basic geometry concepts like the point, the line, the plane, and several 2D shapes.

Our goal is to make sure students not only have a strong grasp of the math skills they need to master this year, but also have the confidence they need to explore and think as they continue to learn about the world around them.

A fourth-grade math curriculum usually begins to step outside the arena of whole numbers and into the area of numbers that are between those integers. The following information will explain the steps you should take to meet your child's 4th grade math goals.

What Math Should a 4th Grader Already Know?

A fourth-grade math student should be able to perform all four operations (addition, subtraction, multiplication and division) with whole numbers. Students should also have memorized the multiplication table through 12, so it's easy to move onto the next level in math without getting hung up on basic multiplication.

What Do 4th Graders Learn in Math?

The major math concepts covered for a fourth-grade curriculum are:

- Multiplication Table (if not memorized yet)
- Operations with Fractions (addition, subtraction, multiplication and division)
- Arithmetic of Mixed Numbers and Improper Fractions
- Representing Word Problems with Math
- Finding the Perimeter and Area of Geometric Shapes
- Measurement in the Standard System

SCHEDULING TIPS! Be sure to include a bit of wiggle room in case your student needs extra time with a math topic. Also note that students may do Geometry at any time during the year.

For example, your schedule might look like this for a **Mastery Approach**:

September	October	November	December
Fractions Session #1: (Beginner & Intermediate)	Fractions Session #2: (Beginner & Intermediate Level)	Fractions Session #3: (Beginner & Intermediate Level)	Two weeks of extra practice if needed.
January Fractions Session #4 (Beginner & Intermediate Level)	**February** Fractions Session #5 (Beginner & Intermediate Level)	**March** Geometry #1-3	**April** Fractions Session #6 (Beginner & Intermediate Level)
May Fractions Session #7 (Beginner & Intermediate Level)	**June** Fraction Review Test Math Camp	**July** Fractions #1-4: Advanced Level Labs	**August** Fractions #5-7 Advanced Level Labs Arithmetic Review

And here's an example of your schedule using a **Spiral Approach**:

September	October	November	December
Fractions Session #1: (Beginner) Fractions Session #2: (Beginner)	Fractions Session #3: (Beginner) Fractions Session #4: (Beginner)	Fractions Session #5: (Beginner Level) Fractions Session #6: (Beginner Level)	Fractions Session #7: (Beginner Level)
January Fractions Session #1 (Intermediate Level) Fractions Session #2 (Intermediate Level)	**February** Fractions Session #3 (Intermediate Level) Fractions Session #4 (Intermediate Level)	**March** Geometry #1-3 Opportunity for any make-up work or extra review	**April** Fractions Session #5 (Intermediate Level) Spring Break
May Fractions Session #6 (Intermediate Level) Fractions Session #7 (Intermediate Level)	**June** Fraction Review Test Math Camp	**July** Fractions #1-4: Advanced Level Labs	**August** Fractions #5-7 Advanced Level Labs Arithmetic Review

4ᵗʰ Grade Math Lesson Plan (34 weeks) – Spiral Approach

Spiral Approach: Students complete just the Beginner Level (including workbook assignments) and then move onto next concept, returning to go into more depth for the second pass through the content in the Intermediate level. This approach is good for students that are quick to pick up concepts, enjoy variety and need a review on a regular basis to retain information.

Summer Term: Review – not included in the 34 weeks count

- [Multiplication Table](#) (For numbers 1-12 as needed)
- [Arithmetic Review](#) (Review before starting Fractions)

Fall Term: Fractions *Spend two weeks on each of the following:*

- [Session #1:](#) Introduction to Fractions (Beginner Level)
- [Session #2:](#) Multiplying Fractions (Beginner Level)
- [Session #3:](#) Multiplying & Dividing Fractions (Beginner Level)
- [Session #4:](#) Addition & Subtraction with Same Denominators (Beginner Level)
- [Session #5:](#) Addition & Subtraction with Different Denominators (Beginner Level)
- [Session #6:](#) Mixed Numbers & Improper Fractions and Ratios (Beginner Level)
- [Session #7:](#) Mixed Numbers & Improper Fractions (Beginner Level)

Winter Term: Fractions *Spend two weeks on each of the following:*

- [Session #1:](#) Introduction to Fractions (Intermediate Level)
- [Session #2:](#) Multiplying Fractions (Intermediate Level)
- [Session #3:](#) Multiplying & Dividing Fractions (Intermediate Level)
- [Session #4:](#) Addition & Subtraction with Same Denominators (Intermediate Level)
- [Session #5:](#) Addition & Subtraction with Different Denominators (Intermediate Level)
- [Session #6:](#) Mixed Numbers & Improper Fractions and Ratios (Intermediate Level)
- [Session #7:](#) Mixed Numbers & Improper Fractions (Intermediate Level)

Spring Term: Geometry (Join us Live in Spring!) *Spend 1-2 weeks on each of the following:*

- [Session #1:](#) Geometry Basics
- [Session #2:](#) Area of Shapes
- [Session #3:](#) Composite Figures

4th Grade Math Lesson Plan (34 weeks) – Spiral Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1: Introduction to Fractions	Beginner	1	#1: Pages 1-12	
			2	#1: Pages 13-25	
	Session #2: Multiplying Fractions	Beginner	3	#1: Pages 26-36	
				#1: Pages 37-42	
			4	#1 TEST: Pages 43-44	
				#2: Pages 1-3	
	Session #3: Multiplying & Dividing Fractions	Beginner	5	#2: Pages 4-14	
				#2: Pages 15-26	
			6	#2: Pages 27-30	
				Time Lab Part 1	
	Session #4: Addition & Subtraction with Same Denominators	Beginner	7	#2: Pages 31-35	
				#2: TEST: Pages 36-37	
			8	#3: Pages 1-16	
				Precision Measurement	
	Session #5: Addition & Subtraction with Different Denominators	Beginner	9	#3: Pages 17-39	
			10	#3: TEST Pages 40-41	
				Measuring Curves/Std Units	
	Session #6: Mixed Numbers & Improper Fractions and Ratios	Beginner	11	#4: Pages 1-21	
			12	Fraction Maze #12	
				Fraction Maze #13	
	Session #7: Mixed Numbers & Improper Fractions	Beginner	13	#4: Pages 22-43	
				#4: TEST Pages 44-45	
			14	Fraction Skills Practice Test	
				Tic Tac Toe #1	
	Session #1: Introduction to Fractions	Intermediate	15	Ice Cream Shop	
			16	Scavenger Hunt	
				Dominoes	
	Session #2: Multiplying Fractions	Intermediate	17	Pizza Place	
			18	Spoons: Fractions	
				Fractions Bingo	
	Session #3: Multiplying & Dividing Fractions	Intermediate	19	Bakery (1, 3-8, 10-12, 14-16)	
			20	Fraction LEGOs	
				Rocket Race	
				Measurement Maze	

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Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #4: Addition & Subtraction with Same Denominators	Intermediate	21	Bakery (1, 3-8, 10-12, 14-16)	
			22	Spoons: Reduce	
				Battle Math Ship	
				Precision Gauges	
				Fractions Maze	
	Session #5: Addition & Subtraction with Different Denominators	Intermediate	23	Fraction Fair	
			24	LEGO Gear Lab	
				BINGO: Equivalent	
				Fractions Game	
	Session #6: Mixed Numbers & Improper Fractions and Ratios	Intermediate	25	Fraction Bump!	
				Lemonade Stand	
				Going for a Walk	
			26	Spoons: Fraction War	
				Fraction Maze #15	
				Fraction Maze #16	
				3 & 4 in a Row	
	Session #7: Mixed Numbers & Improper Fractions	Intermediate	27	Fraction Maze #17	
				Fraction Maze #18	
			28	Paper Airplane Lab	
				Tic Tac Toe #2	
	Fraction Review	All	29	Fraction Final Review/Test	
	Geometry #1: Basic Concepts	All	30	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2: Rectangles, Parallelograms, Triangles & Trapezoids	All	31	Geometry Pages 17-31	
			32	Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry #3: Composite Shapes	All	33	Geometry Pages 32-36	
			34	Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	

4th Grade Math Lesson Plan (34 weeks) – Mastery Approach

Mastery Approach: Students complete both Beginner and Intermediate Levels before moving to next concept. Good for students that prefer a slower, more in-depth study pace that focuses on just one new concept at a time.

Summer Term: Review – not included in the 34 weeks count

- [Multiplication Table](#) (For numbers 1-12 as needed)
- [Arithmetic Review](#) (Review before starting Fractions)

Fall Term: *Spend two weeks on each of the following*

- [Session #1:](#) Introduction to Fractions (Beginner Level)
- [Session #1:](#) Introduction to Fractions (Intermediate Level)
- [Session #2:](#) Multiplying Fractions (Beginner Level)
- [Session #2:](#) Multiplying Fractions (Intermediate Level)
- [Session #3:](#) Multiplying & Dividing Fractions (Beginner Level)
- [Session #3:](#) Multiplying & Dividing Fractions (Intermediate Level)

Winter / Spring Term: *Spend two weeks on each of the following*

- [Session #4:](#) Addition & Subtraction with Same Denominators (Beginner Level)
- [Session #4:](#) Addition & Subtraction with Same Denominators (Intermediate Level)
- [Session #5:](#) Addition & Subtraction with Different Denominators (Beginner Level)
- [Session #5:](#) Addition & Subtraction with Different Denominators (Intermediate Level)
- [Session #6:](#) Mixed Numbers & Improper Fractions and Ratios (Beginner Level)
- [Session #6:](#) Mixed Numbers & Improper Fractions and Ratios (Intermediate Level)
- [Session #7:](#) Mixed Numbers & Improper Fractions (Beginner Level)
- [Session #7:](#) Mixed Numbers & Improper Fractions (Intermediate Level)

Spring Term: Geometry (Join us LIVE in Spring!)

- [Session #1:](#) Geometry Basics
- [Session #2:](#) Area of Shapes
- [Session #3:](#) Composite Figures

4th Grade Math Lesson Plan (34 weeks) – Mastery Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1: Introduction to Fractions	Beginner	1	#1: Pages 1-12	
			2	#1: Pages 13-25	
		Intermediate	3	Ice Cream Shop	
			4	Scavenger Hunt	
				Dominoes	
	Session #2: Multiplying Fractions	Beginner	5	#1: Pages 26-36	
			6	#1: Pages 37-42	
				#1 TEST: Pages 43-44	
				#2: Pages 1-3	
		Intermediate	7	Pizza Place	
			8	Spoons: Fractions	
				Fractions Bingo	
	Session #3: Multiplying & Dividing Fractions	Beginner	9	#2: Pages 4-14	
				#2: Pages 15-26	
			10	#2: Pages 27-30	
				Time Lab Part 1	
		Intermediate	11	Bakery (1, 3-8, 10-12, 14-16)	
			12	Fraction LEGOs	
				Rocket Race	
				Measurement Maze	
	Session #4: Addition & Subtraction with Same Denominators	Beginner	13	#2: Pages 31-35	
				#2: TEST: Pages 36-37	
			14	#3: Pages 1-16	
				Precision Measurement	
		Intermediate	15	Bakery (1, 3-8, 10-12, 14-16)	
			16	Spoons: Reduce & Compare	
				Battle Math Ship	
				Precision Gauges	
				Fractions Maze	
	Session #5: Addition & Subtraction with Different Denominators	Beginner	17	#3: Pages 17-39	
			18	#3: TEST Pages 40-41	
				Measuring Curves/Std Units	
		Intermediate	19	Fraction Fair	
			20	LEGO Gear Lab	
				BINGO: Equivalent Fractions	
				Fractions Board Game	

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #6: Mixed Numbers & Improper Fractions and Ratios	Beginner	21	#4: Pages 1-21	
			22	Fraction Maze #12	
				Fraction Maze #13	
		Intermediate	23	Fraction Bump!	
				Lemonade Stand	
				Going for a Walk	
			24	Spoons: Fraction War	
				Fraction Maze #15	
				Fraction Maze #16	
				3 & 4 in a Row	
	Session #7: Mixed Numbers & Improper Fractions	Beginner	25	#4: Pages 22-43	
				#4: TEST Pages 44-45	
			26	Fraction Skills Practice Test	
				Tic Tac Toe #1	
		Intermediate	27	Fraction Maze #17	
				Fraction Maze #18	
			28	Paper Airplane Lab	
				Tic Tac Toe #2	
	Fraction Review	All	29	Fraction Review Session	
	Geometry #1: Basic Concepts	All	30	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2: Rectangles, Parallelograms, Triangle & Trapezoids	All	31	Geometry Pages 17-31	
			32	Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry #3: Composite Shapes	All	33	Geometry Pages 32-36	
			34	Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	

5th Grade Math Curriculum

In fifth grade, students will be building on their arithmetic abilities with whole numbers and fractions as they move into the world of decimals. Fifth graders also are introduced to the metric of measurement and basic geometry concepts like circles, quadrilaterals, and composite shapes.

A fifth-grade math curriculum starts with place value, then moves into calculating decimal numbers from fractions. Students begin to understand that fractions are really just little division problems as they create decimal equivalents for fractions and mixed numbers. The following information will explain the steps you should take to meet your child's 5th grade math goals.

What Math Should a 5th Grader Already Know?

A fifth-grade math student should be able to perform all four operations (addition, subtraction, multiplication and division) with whole numbers *and* fractions. Students should also have memorized the multiplication table through 12, so it's easy to move onto the next level in math without getting hung up on basic multiplication. Fifth graders also are able to measure in the standard system of measurement and work with those measurements to solve real-world problems.

What Do 5th Graders Learn in Math?

The major math concepts covered for a fifth-grade curriculum are:

- Multiplication Table (if not memorized yet)
- Place Value
- Converting Fractions to Decimals
- Operations with Decimals (addition, subtraction, multiplication and division)
- Converting Mixed Numbers and Improper Fractions to Decimals
- Working with numbers to the thousandths place
- Determine the Least Common Multiple and the Greatest Common Factor
- Representing Word Problems with Math
- Measuring Angles using a Protractor
- Finding the Perimeter and Area of Geometric Shapes
- Measurement in the Metric System

SCHEDULING TIPS! Be sure to include a bit of wiggle room in case your student needs extra time with a math topic. Also note that students may do Geometry at any time during the year.

For example, your schedule might look like this for a **Mastery Approach**:

September	October	November	December
Decimals Session #1: (Beginner & Intermediate)	Decimals Session #2: (Beginner & Intermediate Level)	Decimals Session #3: (Beginner & Intermediate Level)	Two weeks of extra practice if needed.
January Decimals Session #4 (Beginner & Intermediate Level)	**February** Decimals Session #5 (Beginner & Intermediate Level)	**March** Geometry #1-3	**April** Decimals Session #6 (Beginner & Intermediate Level)
May Decimals Session #7 (Beginner & Intermediate Level)	**June** Decimal Review Test Math Camp	**July** Decimals #1-4: Advanced Level Labs	**August** Decimals #5-7 Advanced Level Labs

And here's an example of your schedule using a **Spiral Approach**:

September	October	November	December
Decimals Session #1: (Beginner) Decimals Session #2: (Beginner)	Decimals Session #3: (Beginner) Decimals Session #4: (Beginner)	Decimals Session #5: (Beginner Level) Decimals Session #6: (Beginner Level)	Decimals Session #7: (Beginner Level)
January Decimals Session #1 (Intermediate Level) Decimals Session #2 (Intermediate Level)	**February** Decimals Session #3 (Intermediate Level) Decimals Session #4 (Intermediate Level)	**March** Geometry #1-3 Opportunity for any make-up work or extra review	**April** Decimals Session #5 (Intermediate Level) Spring Break
May Decimals Session #6 (Intermediate Level) Decimals Session #7 (Intermediate Level)	**June** Decimal Review Test Math Camp	**July** Decimals #1-4: Advanced Level Labs	**August** Decimals #5-7 Advanced Level Labs

5th Grade Math Lesson Plan (36 weeks) – Spiral Approach

Spiral Approach: Students complete just the Beginner Level (including workbook assignments) and then move onto next concept, returning to go into more depth for the second pass through the content in the Intermediate level. This approach is good for students that are quick to pick up concepts, enjoy variety and need a review on a regular basis to retain information.

Summer Term: Review – not included in the 36 weeks count

- [Multiplication Table](#) (For numbers 1-12 as needed)
- [Arithmetic Review](#) (Review before starting the academic year)

Fall Term: Decimals *Spend two weeks on each of the following:*

- [Session #1:](#) Place Value (Beginner Level)
- [Session #2:](#) Converting Decimals & Fractions (Beginner Level)
- [Session #3:](#) Adding & Subtracting Decimals (Beginner Level)
- [Session #4:](#) Multiplying Decimals (Beginner Level)
- [Session #5:](#) Dividing Decimals (Beginner Level)
- [Session #6:](#) Dividing Decimals (Beginner Level)
- [Session #7:](#) Four Operations with Decimals (Beginner Level)

Winter Term: Decimals *Spend two weeks on each of the following:*

- [Session #1:](#) Place Value (Intermediate Level)
- [Session #2:](#) Converting Decimals & Fractions (Intermediate Level)
- [Session #3:](#) Adding & Subtracting Decimals (Intermediate Level)
- [Session #4:](#) Multiplying Decimals (Intermediate Level)
- [Session #5:](#) Dividing Decimals (Intermediate Level)
- [Session #6:](#) Dividing Decimals (Intermediate Level)
- [Session #7:](#) Four Operations with Decimals (Intermediate Level)

Spring Term: Geometry (Join us Live in Spring!) *Spend 1-2 weeks on each of the following:*

- [Session #1:](#) Geometry Basics
- [Session #2:](#) Area of Shapes
- [Session #3:](#) Composite Figures
- [Session #4:](#) Circles

5th Grade Math Lesson Plan (36 weeks) – Spiral Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1: Decimals & Place Value	Beginner	1	#1: Pages 1-13	
				Measuring in Metric	
			2	#1: Pages 14-23	
				Candy Shop	
	Session #2: Converting Decimals & Fractions	Beginner	3	#1: Pages 24-33	
				#1: Pages 34-43	
			4	#1: TEST Pages 44-45	
				#2: 1-8	
				Plotting on a Number Line	
	Session #3: Adding & Subtracting Decimals	Beginner	5	#2: Pages 9-16	
				#2: Pages 17-24	
			6	#2: Pages 25-32	
	Session #4: Multiplying Decimals	Beginner	7	#2: Pages 33-43	
			8	#2: TEST Pages 44-45	
				#3: 1-4	
				Multiplication with M&Ms	
	Session #5: Dividing Decimals Part 1	Beginner	9	#3: 5-13	
				#3: 14-23	
			10	#3: 24-34	
				#3: 35-43	
				#3: TEST Pages 44-45	
				Metric Scavenger Hunt	
	Session #6: Dividing Decimals Part 2	Beginner	11	#4: Pages 1-8	
			12	#4: Pages 9-19	
				M&M Number Patterns	
	Session #7: Four Operations with Decimals	Beginner	13	#4: 20-31	
				#4: 32-40	
			14	#4: TEST 41-42	
				Decimal & Fraction Review	
	Session #1: Decimals & Place Value	Intermediate	15	Fast Food Restaurant	
			16	Place Value Dominoes	
				Number Sense with M&Ms	
	Session #2: Converting Decimals & Fractions	Intermediate	17	Farm Project	
			18	Decimal-Fraction Flip Chart	
				Decimal-Fraction Dominoes	
	Session #3: Adding & Subtracting Decimals	Intermediate	19	Grocery Store	
			20	Rounding Dominoes	
				Decimal Operations Wheel	
				Library Scavenger Hunt	
	Session #4: Multiplying Decimals	Intermediate	21	Donut Shop	
			22	Math Squares	
				Dodecahedron Reference	
				Decimal Maze	

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
			23	M&M Order of Operations	
	Session #5: Dividing Decimals Part 1	Intermediate		Division Maze	
				Decimal Dash	
			24	Powers of Ten Packet	
				Reverse Scavenger Hunt	
				Decimal of the Day Part 1	
			25	Earth Day Adventure	
	Session #6: Dividing Decimals Part 2	Intermediate	26	M&M Word Problems	
				Mystery Number Decimal	
				Dice Roll Game	
				Division Maze	
				Decimal of the Day Part 2	
			27	Carwash Fundraiser	
	Session #7: Four Operations with Decimals	Intermediate	28	Family Math Night	
				Rational Numbers Maze	
				Prime Numbers	
				Decimal of the Day Part 3	
	Decimal Review	All	29	Decimal Final Review/Test	
	Geometry #1: Basic Concepts	All	30	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2: Rectangles, Parallelograms, Triangles & Trapezoids	All	31	Geometry Pages 17-31	
			32	Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry #3: Composite Shapes	All	33	Geometry Pages 32-36	
			34	Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
	Geometry #4: Circles	All	35	Geometry Pages 37-40	
				Geometry TEST Pages 41-42	
			36	Packet #3	
				Area of a Circle Activity	
				Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	

5th Grade Math Lesson Plan (36 weeks) – Mastery Approach

Mastery Approach: Students complete both Beginner and Intermediate Levels before moving to next concept. Good for students that prefer a slower, more in-depth study pace that focuses on just one new concept at a time.

Summer Term: Review (August) – not included in the 36 weeks count

- [Multiplication Table](#) (For numbers 1-12 as needed)
- [Arithmetic Review](#) (Review before starting Fractions)

Fall Term: Decimals *Spend two weeks on each of the following:*

- [Session #1:](#) Place Value (Beginner Level)
- [Session #1:](#) Place Value (Intermediate Level)
- [Session #2:](#) Converting Decimals & Fractions (Beginner Level)
- [Session #2:](#) Converting Decimals & Fractions (Intermediate Level)
- [Session #3:](#) Adding & Subtracting Decimals (Beginner Level)
- [Session #3:](#) Adding & Subtracting Decimals (Intermediate Level)

Winter / Spring Term: Decimals *Spend two weeks on each of the following*

- [Session #4:](#) Multiplying Decimals (Beginner Level)
- [Session #4:](#) Multiplying Decimals (Intermediate Level)
- [Session #5:](#) Dividing Decimals (Beginner Level)
- [Session #5:](#) Dividing Decimals (Intermediate Level)
- [Session #6:](#) Dividing Decimals (Beginner Level)
- [Session #6:](#) Dividing Decimals (Intermediate Level)
- [Session #7:](#) Four Operations with Decimals (Beginner Level)
- [Session #7:](#) Four Operations with Decimals (Intermediate Level)

Spring Term: Geometry (Join us Live in Spring!) *Spend 1-2 weeks on each of the following:*

- [Session #1:](#) Geometry Basics
- [Session #2:](#) Area of Shapes
- [Session #3:](#) Composite Figures
- [Session #4:](#) Circles

5th Grade Math Lesson Plan (36 weeks) – Mastery Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1: Introduction to Decimals & Place Value	Beginner	1	#1: Pages 1-13	
				Measuring in Metric	
			2	#1: Pages 14-23	
				Candy Shop	
		Intermediate	3	Fast Food Restaurant	
			4	Place Value Dominoes	
				Number Sense with M&Ms	
	Session #2: Converting Decimals & Fractions	Beginner	5	#1: Pages 24-33	
				#1: Pages 34-43	
			6	#1: TEST Pages 44-45	
				#2: 1-8	
				Plotting on a Number Line	
		Intermediate	7	Farm Project	
			8	Decimal-Fraction Flip Chart	
				Decimal-Fraction Dominoes	
	Session #3: Adding & Subtracting Decimals	Beginner	9	#2: Pages 9-16	
				#2: Pages 17-24	
			10	#2: Pages 25-32	
		Intermediate	11	Grocery Store	
			12	Rounding Dominoes	
				Decimal Operations Wheel	
				Library Scavenger Hunt	
	Session #4: Multiplying Decimals	Beginner	13	#2: Pages 33-43	
			14	#2: TEST Pages 44-45	
				#3: 1-4	
				Multiplication with M&Ms	
		Intermediate	15	Donut Shop	
			16	Math Squares	
				Dodecahedron Reference	
				Decimal Maze	
	Session #5: Dividing Decimals Part 1	Beginner	17	#3: 5-13	
				#3: 14-23	
			18	#3: 24-34	
				#3: 35-43	
				#3: TEST Pages 44-45	
				Metric Scavenger Hunt	
		Intermediate	19	M&M Order of Operations	
				Division Maze	
				Decimal Dash	
			20	Powers of Ten Packet	
				Reverse Scavenger Hunt	
				Decimal of the Day Part 1	

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Date	Math Lesson	Level	Week	Workbook / Assignment	Score
		Beginner	21	#4: Pages 1-8	
			22	#4: Pages 9-19	
				M&M Number Patterns	
	Session #6: Dividing Decimals Part 2	Intermediate	23	Earth Day Adventure	
			24	M&M Word Problems	
				Mystery Number Decimal	
				Dice Roll Game	
				Division Maze	
				Decimal of the Day Part 2	
		Beginner	25	#4: 20-31	
				#4: 32-40	
			26	#4: TEST 41-42	
	Session #7: Four Operations with Decimals			Decimal & Fraction Review	
		Intermediate	27	Carwash Fundraiser	
			28	Family Math Night	
				Rational Numbers Maze	
				Prime Numbers	
				Decimal of the Day Part 3	
	Decimal Review	All	29	Decimal Final Review/Test	
	Geometry #1: Basic Concepts	All	30	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2: Rectangles, Parallelograms, Triangles & Trapezoids	All	31	Geometry Pages 17-31	
			32	Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry #3: Composite Shapes	All	33	Geometry Pages 32-36	
			34	Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
	Geometry #4: Circles	All	35	Geometry Pages 37-40	
				Geom. TEST Pages 41-42	
			36	Packet #3	
				Area of a Circle Activity	
				Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	

6th Grade Math Curriculum

In sixth grade, students cover three main areas in math: Percentage & Ratios, 2D and 3D Geometry, and Pre-Algebra concepts. We will cover each of these in detail with lots of hands-on practical applications for all areas. The following information will explain the steps you should take to meet your child's 6th grade math goals.

What Math Should a 6th Grader Already Know?

A sixth-grade math student should be able to perform the following:

- Be comfortable with all four operations (addition, subtraction, multiplication and division) with both fractions *and* decimals
- Measure angles with protractors
- Determine the correct place value
- Convert decimals to fractions and vice versa
- Calculate area and perimeter for basic geometry shapes (squares, rectangles and circles)
- Be developing their spatial sense with 2D and 3D geometry
- Able to handle measurement calculations for both standard and metric systems (and find their equivalents)

What Do 6th Graders Learn in Math?

The major math concepts covered for a sixth-grade curriculum are:

- Fractions & Decimal Review
- Ratios, Proportion and Unit Rates
- Percent and equivalent Fraction and Decimal Numbers
- Percent Proportion
- Percent Change & Percent Error
- Simple & Compound Interest
- Number Lines, Absolute Values & Inequalities
- Geometry: Point, Line, Plane, Angles, Triangles, Quadrilaterals, Circles
- Plane Geometry: Area and Perimeter for Basic and Composite Shapes
- 3D Geometry: Surface Area & Volume of Pyramids, Prisms, Cylinders and Spheres
- Operations on Integers (Prime Factorization, Positive & Negative Numbers Operations)
- Variables, Terms & Expressions (Evaluating Expressions, Exponents)
- Graphing on the Coordinate Plane

SCHEDULING TIPS! Be sure to include a bit of wiggle room in case your student needs extra time with a math topic. Also note that students may do Geometry at any time during the year.

For example, your schedule might look like this for a **Mastery Approach**:

September	October	November	December
Percent Session #1: (Beginner & Intermediate)	Percent Session #2: (Beginner & Intermediate Level)	Percent Session #3: (Beginner & Intermediate Level)	Percent Session #4 (Beginner & Intermediate Level)
January Percent Session #5 (Beginner & Intermediate Level) Percent Session #6 (Beginner)	**February** Percent Session #6 (Intermediate Level) Percent Session #7 (Beginner & Intermediate Level)	**March** Geometry #1-4	**April** Geometry #5-6 Pre-Algebra #1-2
May Pre-Algebra #3-5	**June** Percent Review Test Math Camp	**July** Percent #1-4: Advanced Level Labs	**August** Percent #5-7 Advanced Level Labs

And here's an example of your schedule using a **Spiral Approach**:

September	October	November	December
Percent Session #1: (Beginner) Percent Session #2: (Beginner)	Percent Session #3: (Beginner) Percent Session #4: (Beginner & Intermediate)	Percent Session #5: (Beginner & Intermediate Level) Percent Session #6: (Beginner Level)	Percent Session #1 (Intermediate Level)
January Percent Session #2 (Intermediate Level) Percent Session #3 (Intermediate Level)	**February** Percent Session #6 (Intermediate Level) Percent Session #7 (Beginner & Intermediate)	**March** Geometry #1-4	**April** Geometry #5-6 Pre-Algebra #1-2
May Pre-Algebra #3-5	**June** Percent Review Test Math Camp	**July** Percent #1-4: Advanced Level Labs	**August** Percent #5-7 Advanced Level Labs

6th Grade Math Lesson Plan (36 weeks) – Spiral Approach

Spiral Approach: Students complete just the Beginner Level (including workbook assignments) and then move onto next concept, returning to go into more depth for the second pass through the content in the Intermediate level. This approach is good for students that are quick to pick up concepts, enjoy variety and need a review on a regular basis to retain information.

Fall Term: Percent *Spend two weeks on each of the following*

- Session #1: Intro to Percents & Personal Finances (Beginner Level)
- Session #2: Percent Proportion (Beginner Level)
- Session #3: Multi-Step Percent Calculations (Beginner Level)
- Session #4: Percent Change (Beginner & Intermediate Level)
- Session #5: Percent Error (Beginner & Intermediate Level)
- Session #6: Simple & Compound Interest (Beginner Level)
- Session #1: Intro to Percents & Personal Finances (Intermediate Level)

Winter / Spring Term: Percent *Spend two weeks on each of the following*

- Session #2: Percent Proportion (Intermediate Level)
- Session #3: Multi-Step Percent Calculations (Intermediate Level)
- Session #6: Simple & Compound Interest (Intermediate Level)
- Session #7: Review (Beginner & Intermediate Level)

Spring Term: Geometry (March-April) *Spend 1-2 weeks on each of the following*

- Session #1: Geometry Basics
- Session #2: Area of Shapes
- Session #3: Composite Figures
- Session #4: Circles
- Session #5: 3D Figures & Nets
- Session #6: Volume

Spring Term: Pre-Algebra (April-May) *Spend 1-2 weeks on each of the following*

- Session #1: Operations on Integers
- Session #2: Operations on Integers
- Session #3: Variables, Terms & Expressions
- Session #4: Variables, Terms & Expressions
- Session #5: Graphing Ordered Pairs

Summer Review: Full Review for Graduating 6th Graders – not included in the 36 weeks count

- Series of 10 Full Review Sessions

NOTE: If you finish Unit 3: Percent ahead of schedule, you may request to switch to the upper level and begin your work on Probability and then Statistics.

6ᵗʰ Grade Math Lesson Plan (36 weeks) – Spiral Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Percent Session #1: Introduction to Percent	Beginner	1	#1: Pages 1-9	
			2	#1: Pages 10-18	
				Scavenger Hunt	
	Percent Session #2: Percent Proportion	Beginner	3	#1: Pages 19-26	
			4	#1: Pages 27-38	
				#1: TEST Pages 39-40	
				Trifold Project	
				Conversion Maze	
	Percent Session #3: Multi-Step Percent Calculations	Beginner	5	#2: Pages 1-11	
				#2: Pages 12-16	
			6	#2: Pages 17-22	
				Matchup Cards	
	Percent Session #4: Percent Change	Beginner	7	#2: Pages 23-30	
			8	#2: Pages 31-41	
				#2: TEST Pages 42-43	
				Matching Game	
	Percent Session #5: Percent Error	Beginner	9	#3: Pages 1-13	
	Percent Session #6: Simple & Compound Interest	Beginner	10	#3: Pages 14-23	
				Notebook Activity	
	Percent Session #7: Percent Unit Review	Beginner	11	#3: Pages 24-39	
			12	#3: TEST Pages 40-41	
				Mini Escape Room	
	Percent Session #1: Introduction to Percent	Intermediate	13	Creative Art Project	
				BINGO Percent	
				Percent Packet #1	
				Scavenger Hunt	
			14	Percent & Proportions Packet	
				Converting Fractions, Decimals & Percent	
	Percent Session #2: Percent Proportion	Intermediate	15	Percent Packet #2	
			16	Better Buy Tacos	
				Go Fish!	
				Proportion Maze	
	Percent Session #3: Multi-Step Percent Calculations	Intermediate	17	Percent Packet #3	
			18	Discount & Sales	
				Daisy's Donuts	
				Better Buy Movies	
				Squares Game	

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6ᵗʰ Grade Math Lesson Plan (36 weeks) – Spiral Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
				Percent Packet #4	
	Percent Session #4: Percent Change	Intermediate	19	Quick Quiz	
				Gummy Bear Lab	
				Height & Weight Change	
				Scavenger Hunt	
				Percent Packet #5	
	Percent Session #5: Percent Error	Intermediate	20	Error Practice Problems	
				Error Guessing Game	
				Calculating Speedometers	
			21	Percent Packet #6	
	Percent Session #6: Simple & Compound Interest	Intermediate		Simple Triangle Puzzle	
				Simple Mad Lib Practice	
			22	Simple Foldable Activity	
				Compound Notebook	
				Flipbooks	
				Maze Practice	
	Percent Session #7: Percent Unit Review	Intermediate	23	Study Packet	
				Review Packet	
			24	Test Packet	
				Escape Room Review	

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6th Grade Math Lesson Plan (36 weeks) – Geometry Series

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Geometry Session #1: Basic Concepts	All	25	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry Session #2: Rectangles, Parallelograms, Triangles & Trapezoids	All	26	Geometry Pages 17-31	
				Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry Session #3: Composite Shapes	All	27	Geometry Pages 32-36	
				Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
	Geometry Session #4: Circles	All	28	Geometry Pages 37-40	
				Geom. TEST Pages 41-42	
				Packet #3	
				Area of a Circle Activity	
				Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	
	Geometry Session #5: 3D Figures & Nets	All	29	Packet #4	
				Folding a Cube	
				Surface Area Cut & Paste	
				Guess My Figure?	
				Coin Game	
				Loops & Rings	
				Quiz #2	
	Geometry Session #6: Volume	All	30	Packet #5	
				28 Task Cards	
				Scavenger Hunt	
				Teeko	
				WHEN is the quiz?	
				Study Review Packet	
				Unit Test	

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6ᵗʰ Grade Math Lesson Plan (36 weeks) – Pre-Algebra

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Pre-Algebra Session #1: Operations on Integers	All	31	#1: Pages 1-23	
				Number Challenge	
				Integer Operations	
				Word Search	
	Pre-Algebra Session #2: Operations on Integers	All	32	#1: Pages 24-35	
				#1: TEST Pages 36-37	
				Packet #1 Pages 1-3	
				Math Lib	
				Task Cards	
				Scavenger Hunt	
	Pre-Algebra Session #3: Variables, Terms & Expressions	All	33	#2: Pages 1-15	
				Packet #1 Pages 7-9	
				Exploring Exponents	
				Mazes	
	Pre-Algebra Session #4: Variables, Terms & Expressions	All	34	#2: Pages 16-36	
				Packet #1 Page 13	
				Pyramid Puzzle	
				Distributive Puzzle	
	Pre-Algebra Session #5: Graphing Ordered Pairs	All	35	#3: Pages 1-8	
				#3: Pages 9-15	
				Packet #1 Pages 15-16	
				Triples	
				8 Stations	
				Scavenger Hunt	
				Geography Basics Handout	
				Globe Trotting Gnomes	
				Geography Battleship	
	Full Review Session	All	36	6ᵗʰ Grade Review Session	

6th Grade Math Lesson Plan (36 weeks) – Mastery Approach

Mastery Approach: Students complete both Beginner and Intermediate Levels before moving to next concept. Good for students that prefer a slower, more in-depth study pace that focuses on just one new concept at a time.

Fall Term: Percent *Spend two weeks on each of the following*

- [Session #1:](#) Intro to Percents & Personal Finances (Beginner Level)
- [Session #1:](#) Intro to Percents & Personal Finances (Intermediate Level)
- [Session #2:](#) Percent Proportion (Beginner Level)
- [Session #2:](#) Percent Proportion (Intermediate Level)
- [Session #3:](#) Multi-Step Percent Calculations (Beginner Level)
- [Session #3:](#) Multi-Step Percent Calculations (Intermediate Level)
- [Session #4:](#) Percent Change (Beginner & Intermediate Level)

Winter / Spring Term: Percent *Spend two weeks on each of the following*

- [Session #5:](#) Percent Error (Beginner & Intermediate Level)
- [Session #6:](#) Simple & Compound Interest (Beginner Level)
- [Session #6:](#) Simple & Compound Interest (Intermediate Level)
- [Session #7:](#) Review (Beginner & Intermediate Level)

Spring Term: Geometry (March-April)

- [Session #1:](#) Geometry Basics
- [Session #2:](#) Area of Shapes
- [Session #3:](#) Composite Figures
- [Session #4:](#) Circles
- [Session #5:](#) 3D Figures & Nets
- [Session #6:](#) Volume

Spring Term: Pre-Algebra (April-May)

- [Session #1:](#) Operations on Integers
- [Session #2:](#) Operations on Integers
- [Session #3:](#) Variables, Terms & Expressions
- [Session #4:](#) Variables, Terms & Expressions
- [Session #5:](#) Graphing Ordered Pairs

Summer Review: Full Review for Graduating 6th Graders – not included in the 36 weeks count

- [Series of 10 Full Review Sessions](#)

NOTE: If you finish [Unit 3: Percent](#) ahead of schedule, you may request to switch to the upper level and begin your work on [Probability](#) and then [Statistics](#).

6th Grade Math Lesson Plan (36 weeks) – Mastery Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Percent Session #1: Introduction to Percent & Personal Finances Part 1	Beginner	1	#1: Pages 1-9	
			2	#1: Pages 10-18	
				Scavenger Hunt	
		Intermediate	3	Creative Art Project	
				BINGO Percent	
				Ratios & Proportions Packet #1	
				Scavenger Hunt	
			4	Percent & Proportions Packet	
				Converting Fractions, Decimals & Percent	
	Percent Session #2: Percent Proportion & Personal Finances Part 2	Beginner	5	#1: Pages 19-26	
			6	#1: Pages 27-38	
				#1: TEST Pages 39-40	
				Trifold Project	
				Conversion Maze	
		Intermediate	7	Percent Packet #2	
			8	Better Buy Tacos	
				Go Fish!	
				Proportion Maze	
	Percent Session #3: Multi-Step Percent Calculations & Personal Finances Part 3	Beginner	9	#2: Pages 1-11	
				#2: Pages 12-16	
			10	#2: Pages 17-22	
				Matchup Cards	
		Intermediate	11	Percent Packet #3	
			12	Discount & Sales	
				Daisy's Donuts	
				Better Buy Movies	
				Squares Game	
	Percent Session #4: Percent Change & Business Math Part	Beginner	13	#2: Pages 23-30	
				#2: Pages 31-41	
				#2: TEST Pages 42-43	
				Matching Game	
		Intermediate	14	Percent Packet #4	
				Quick Quiz	
				Gummy Bear Lab	
				Height & Weight Change	
				Scavenger Hunt	

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6th Grade Math Lesson Plan (36 weeks) – Mastery Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Percent Session #5: Percent Error & Business Math Part 2	Beginner	15	#3: Pages 1-13	
		Intermediate	16	Percent Packet #5	
				Error Practice Problems	
				Error Guessing Game	
				Calculating Speedometers	
	Percent Session #6: Simple & Compound Interest & Business Math Part 3	Beginner	17	#3: Pages 14-23	
				Notebook Activity	
		Intermediate	18	Percent Packet #6	
			19	Simple Triangle Puzzle	
				Simple Mad Lib Practice	
				Simple Foldable Activity	
			20	Compound Notebook	
				Flipbooks	
				Maze Practice	
	Percent Session #7: Percent Unit Review & Business Math Part 4	Beginner	21	#3: Pages 24-39	
			22	#3: TEST Pages 40-41	
				Mini Escape Room	
		Intermediate	23	Study Packet	
				Review Packet	
			24	Test Packet	
				Escape Room Review	

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6th Grade Math Lesson Plan (36 weeks) – Geometry Series

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Geometry Session #1: Basic Concepts	All	25	Geometry Pages 1-16	
				BINGO: Lines & Rays	
				BINGO: Shapes & Figures	
				Biscuits	
	Geometry Session #2: Rectangles, Parallelograms, Triangles & Trapezoids	All	26	Geometry Pages 17-31	
				Packet #1	
				Modeling Area Booklet	
				Floating Paperclip	
	Geometry Session #3: Composite Shapes	All	27	Geometry Pages 32-36	
				Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
	Geometry Session #4: Circles	All	28	Geometry Pages 37-40	
				Geom. TEST Pages 41-42	
				Packet #3	
				Area of a Circle Activity	
				Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	
	Geometry Session #5: 3D Figures & Nets	All	29	Packet #4	
				Folding a Cube	
				Surface Area Cut & Paste	
				Guess My Figure?	
				Coin Game	
				Loops & Rings	
				Quiz #2	
	Geometry Session #6: Volume	All	30	Packet #5	
				28 Task Cards	
				Scavenger Hunt	
				Teeko	
				WHEN is the quiz?	
				Study Review Packet	
				Unit Test	

6th Grade Math Lesson Plan (36 weeks) – Pre-Algebra

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Pre-Algebra Session #1: Operations on Integers	All	31	#1: Pages 1-23	
				Number Challenge	
				Integer Operations	
				Word Search	
	Pre-Algebra Session #2: Operations on Integers	All	32	#1: Pages 24-35	
				#1: TEST Pages 36-37	
				Packet #1 Pages 1-3	
				Math Lib	
				Task Cards	
				Scavenger Hunt	
	Pre-Algebra Session #3: Variables, Terms & Expressions	All	33	#2: Pages 1-15	
				Packet #1 Pages 7-9	
				Exploring Exponents	
				Mazes	
	Pre-Algebra Session #4: Variables, Terms & Expressions	All	34	#2: Pages 16-36	
				Packet #1 Page 13	
				Pyramid Puzzle	
				Distributive Puzzle	
	Pre-Algebra Session #5: Graphing Ordered Pairs	All	35	#3: Pages 1-8	
				#3: Pages 9-15	
				Packet #1 Pages 15-16	
				Triples	
				8 Stations	
				Scavenger Hunt	
				Geography Basics Handout	
				Globe Trotting Gnomes	
				Geography Battleship	
	Full Review Session	All	36	6th Grade Review Session	

OPTIONAL: Fraction/Decimal Labs (14-18 weeks)

Date	Math Lesson	Level	Workbook / Assignment	Score
	Fractions Session #1: Introduction to Fractions	Advanced	Forensics Faces	
			Standard Units	
			Whale, Condor & Eagle Lab	
			Astronomy Labs #1-4	
	Fractions Session #2: Multiplying Fractions	Advanced	Inches to Feet Worksheet	
			Floor Plan	
			Baking Project	
			Weather Lab	
	Fractions Session #3: Multiplying & Dividing Fractions	Advanced	Bakery Shop (#2, 9, 13)	
			Math Time Lab (#2-4)	
			Solar Flares	
			Solar Storms	
	Fractions Session #4: Addition & Subtraction with Same Denominators	Advanced	Astronomy Labs #1-5	
			Volcano Lab	
	Fractions Session #5: Addition & Subtraction with Different Denominators	Advanced	Astronomy Labs #2-5 (#1 done in Math Lesson)	
			Bicycle Lab	
	Fractions Session #6: Mixed Numbers & Improper Fractions	Advanced	Ratios Packet	
			Bouncy Ball Lab	
	Fractions Session #7: Mixed Numbers & Improper Fractions	Advanced	Snakes Game	
			Astronomy Labs #1-5	
			Architectural Scales	
	Decimals Session #1: Place Value	Advanced	Geography Basics Lab	
			Geography Labs #1-2	
			Globe Trotting Gnomes	
			Geography Battleship	
	Decimals Session #2: Converting Decimals & Fractions	Advanced	Tracking Animal Migration	
			Astronomy Labs #1-5	
	Decimals Session #3: Adding & Subtracting Decimals	Advanced	Astronomy Labs #1-4	
			Estimating, Rounding Money	
	Decimals Session #4: Multiplying Decimals	Advanced	Weather Labs	
			Astronomy Labs 1-4	
	Decimals Session #5: Dividing Decimals Part 1	Advanced	Sig Fig Test Practice	
			Chemistry Math Lab	
	Decimals Session #6: Dividing Decimals Part 2	Advanced	Electronics Math Lab	
	Decimals Session #7: Four Decimal Operations	Advanced	Astronomy Labs #1-5	

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OPTIONAL: Percent Labs (7-10 weeks)

Date	Math Lesson	Level	Workbook / Assignment	Score
	Percent Session #1: Personal Finances Part 1	Advanced	Money Math Concepts 1	
			Personal Finances Game	
	Percent Session #2: Personal Finances Part 2	Advanced	Money Math Concepts 2	
			Personal Finances Game	
	Percent Session #3: Personal Finances Part 3	Advanced	Snowball Debt Calculations	
			How to Buy a Car	
	Percent Session #4: Business Math Part 1	Advanced	Business Math Concepts	
			Food Truck Business	
	Percent Session #5: Business Math Part 2	Advanced	Measuring Light Speed	
			Business Math Concepts	
			Food Truck Business	
	Percent Session #6: Business Math Part 3	Advanced	Business Math Concepts	
			Food Truck Business	
	Percent Session #7: Business Math Part 4	Advanced	Mystery Project	
			Business Math Concepts	
			Food Truck Business	

7th Grade Math Curriculum

Our goal is to make sure students complete middle school with not only the math skills they need to be successful in their future high school courses, but also with the confidence they need to explore and discover as they continue to learn about the world around them.

A seventh-grade math curriculum is usually a course that gets the student ready for *Algebra*. You can use this seventh-grade math curriculum as either your main homeschool program or as a supplement to another homeschool curriculum or a traditional school. The following information will explain the steps you should take to meet your child's 7th grade math goals.

What Math Should a 7th Grader Already Know?

A seventh-grade math curriculum covers four main areas of math: Pre-Algebra, Geometry, Probability and Statistics. Students are ready for seventh-grade math when they are very comfortable performing all four operations (additional, subtraction, multiplication and division) for fractions and decimals, and also be fluent in handling ratios, proportion, and percent. Students should also have a basic understanding of simple 2D geometric shapes such as the square, rectangle, triangle, trapezoid, parallelogram and circle.

What Do 7th Graders Learn in Math?

The major math concepts covered for a seventh-grade curriculum are:

- Number Sense
- Pre-Algebra: Operations on Integers
- Pre-Algebra: Variables & Expressions
- Algebra: Multi-Step Equations
- Algebra: Rational Numbers
- Algebra: Inequalities
- Algebra: Graphing
- Geometry: Shapes & Constructions
- Geometry: Plane Geometry
- Ratio and proportional relationships
- Experimental & Theoretical Probability
- Dependent & Independent Probability Events

7th Grade Math Goals and Objectives

By the end of the year, your seventh grader will be able to do the following:

1. Gain proficiency in operating with rational numbers
2. Use rational numbers in both fraction and decimal form
3. Examine proportional relationships and apply them to practical applications
4. Draw, construct, build, and describe basic geometric shapes
5. Solve real world problems where students take measurements in both standard and metric systems (including angle measurement) to calculate area and volume
6. Expand on the fundamental operations of integers, fractions, mixed numbers, and decimals interchangeably
7. Analyze and interpret scientific data from real-world problems
8. Use math properties of specific operations to create equivalent equations
9. Write mathematical equations to describe real-world scenarios and be able to solve these equations using algebra

Special Note Regarding 7th & 8th Grade Math Schedules

We recommend taking two years to complete both a full year-long Algebra course (which also includes pre-Algebra) and a middle school Geometry course.

Start by covering the first half of Algebra (begin with pre-Algebra) and then move into the first half of Geometry during the 7th grade year. You will cover the second halves of both Algebra and Geometry during the 8th grade year, so by the time students finish their 8th grade year, they will have completed both Algebra 1 and middle school level Geometry, and be ready for either Algebra 2 or High School Geometry (whichever is offered for the 9th grade year for their school).

☑ 7th Grade covers Algebra Sessions 1-4; Geometry: Sessions 1-6; Probability

☑ 8th Grade covers Algebra Sessions 5-7; Geometry: Sessions 7-10; Statistics

☑ You may do Algebra all in one year by going through all sessions of Unit 4: Algebra

☑ Please complete Algebra up through Session #4 (Graphing) before starting Geometry

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This is an example of the two-year schedule that covers the first half of both Algebra 1 (with pre-Algebra) and Geometry along with a course in Probability in the 7th Grade year; the second halves of both Algebra 1 and Geometry along with a course in Statistics in the 8th Grade year.

Grade 7: Pre-Algebra, Algebra 1, Geometry & Probability

September	October	November	December
Unit 4: Algebra #1 *(Pre-Algebra) Operations on Integers*	Unit #4: Algebra #1 *(Pre-Algebra) Variables, Terms & Expressions*	Unit 4: Algebra #2 *Multi-Step Equations*	*Algebra Review*
January Unit 4: Algebra #3 *Inequalities*	**February** Unit 5: Geometry #1 & 2 *Shapes, Lines & Angles*	**March** Unit 5: Geometry #3-6 *Plane Geometry*	**April** Unit 4: Algebra #4 *Graphing*
May Probability *Mini Math Course*	**June** Math Camp	**July**	**August** 8th Grade Review (Partial)

Grade 8: Algebra 1, Geometry & Statistics

September	October	November	December
Unit 4: Algebra #2-4 *Review of Multi-Step Equations, Inequalities & Graphing*	Unit 4: Algebra #5 *Linear Systems of Equations*	Unit 4: Algebra #6 *Polynomials*	*Algebra Review*
January Unit 4: Algebra #7 *Quadratic Equations*	**February** Unit 4: Algebra #7 *Quadratic Equations* Unit 5: Geometry #1 *Transformations*	**March** Unit 5: Geometry #7-8 *3D Geometry: Surface Area & Volume*	**April** Unit 5: Geometry #9-10 *Trigonometry Essentials Mini Math Course*
May Statistics *Mini Math Course*	**June** Math Camp	**July**	**August** 8th Grade Review (Full)

7th Grade Math Lesson Plan – 35 Weeks

Week	Unit/Session	Title	Description	Workbook	Pages	Score
1	Unit 4: Session 1	Operations on Integers	Prime Factorization	Algebra Workbook #1	1-6	
2			Number Line, + - Numbers		7-23	
3			Operations on Integers		24-37	
4		Variables, Terms & Expressions	Exponents	Algebra Workbook #2	1-11	
5			Equivalent Expressions		12-17	
6			Like & Unlike Terms		17-25	
7			Order of Operations		26-36	
8			Pre-Algebra Review			
9	Unit 4: Session 2	Multi-Step Equations	Solving One-Step Equations	Algebra Workbook #3	1-8	
10			Solving Two-Step Equations		9-16	
11			Solving Two-Step Equations		17-23	
12			Word Problems		24-37	
13			Algebra Review			
14	Unit 4: Session 3	Rational Numbers & Inequalities	Rational Numbers & Lines	Algebra Workbook #4	1-11	
15			Inequalities & Absolute Value		12-16	
16			Absolute Value		17-26	
17			Relations & Functions		27-37	
18	Unit 5: Geometry Session 2	Angles	Constructing Circles	Geometry Workbook #2	1-10	
19			Constructing Angles		12-16	
20			Constructing Quadrilaterals		17-21	
21			Lines & Angles		22-36	
22	Unit 5: Geometry Session 3-6	Plane Geometry	Circles	Geometry Workbook #3	1-4	
23			Quadrilaterals		5-11	
24			Triangles & Trapezoids		12-17	
25			Composite Figures		19-22	
26			Similarity		23-30	
27			Geometry Review			
28	Unit 4: Algebra Session 4	Graphing	Coordinate Points	Algebra Workbook #5	1-8	
29			Linear Equations		9-16	
30			Slope-Intercept Form		17-29	
31	Mini Math Course	Probability	Probability & Sample Space	Probability Packet	Sect. 1-2	
32			Experimental & Theoretical		Sect. 3-4	
33			Dependent & Independent		Sect. 5-6	
34			Probability Review			
35	Full Course Review					

7th Grade Math Lesson Plan – 35 Weeks

Fall Term (Sept - Dec)

- Week 1: Prime Factorization (Algebra Workbook #1 Pages 1-6)
- Week 2: Number Line, Positive & Negative Numbers (Algebra Workbook #1 Pages 7-23)
- Week 3: Operations on Integers (Algebra Workbook #1 Pages 24-37)
- Week 4: Exponents (Algebra Workbook #2 Pages 1-11)
- Week 5: Equivalent Expressions (Algebra Workbook #2 Pages 12-17)
- Week 6: Like & Unlike Terms (Algebra Workbook #2 Pages 17-25)
- Week 7: Order of Operations (Algebra Workbook #2 Pages 26-36)
- Week 8: Algebra Review
- Week 9: Solving One-Step Equations (Algebra Workbook #3 Pages 1-8)
- Week 10: Solving Two-Step Equations (Algebra Workbook #3 Pages 9-16)
- Week 11: Solving Two-Step Equations (Algebra Workbook #3 Pages 17-23)
- Week 12: Word Problems (Algebra Workbook #3 Pages 24-37)
- Week 13: Algebra Review

Winter Term (Jan - March)

- Week 14: Rational Numbers & Number Lines (Algebra Workbook #4 Pages 1-11)
- Week 15: Inequalities & Absolute Value (Algebra Workbook #4 Pages 12-16)
- Week 16: Solving Inequalities with Absolute Value (Algebra Workbook #4 Pages 17-26)
- Week 17: Relations & Functions & Review (Algebra Workbook #4 Pages 27-37)
- Week 18: Constructing Circles (Geometry Workbook #2: Pages 1-10)
- Week 19: Constructing Angles (Geometry Workbook #2: Pages 12-16)
- Week 20: Constructing Quadrilaterals (Geometry Workbook #2: Pages 17-21)
- Week 21: Lines & Angles (Geometry Workbook #2: Pages 22-36)
- Week 22: Plane Geometry: Circles (Geometry Workbook #3: Pages 1-4)
- Week 23: Plane Geometry: Quadrilaterals (Geometry Workbook #3: Pages 5-11)
- Week 24: Plane Geometry: Triangles & Trapezoids (Geometry Workbook #3: Pages 12-17)
- Week 25: Plane Geometry: Composite Figures (Geometry Workbook #3: Pages 19-22)
- Week 26: Plane Geometry: Similarity (Geometry Workbook #3: Pages 23-30)
- Week 27: Geometry Review

Spring Term (April - May)

- Week 28: Graphing Coordinate Points (Algebra Workbook #5: Pages 1-8)
- Week 29: Graphing Linear Equations (Algebra Workbook #5: Pages 9-16)
- Week 30: Graphing Slope-Intercept Form & Review (Algebra Workbook #5: Pages 17-29)
- Week 31: Probability (Simple Probability & Sample Space)
- Week 32: Probability (Experimental & Theoretical Probability)
- Week 33: Probability (Independent & Dependent)
- Week 34: Probability (Review of Probability)
- Week 35: Review

Completing Algebra 1 in ONE YEAR (instead of two)

The following is for students who are doing a complete Algebra 1 course in one year, starting with pre-Algebra. If you go this route, you will only study algebra so the following year will include a full year of geometry and must also include probability, data and statistics studies.

NOTE: Unit 5 Geometry requires Algebra, so you must complete at least up through Unit 4 Algebra: Session 4 (Graphing) before starting Unit 5: Geometry.

STUDY SCHEDULE: FULL ALGEBRA 1 COURSE

This is an example of the schedule that covers a full year of only Algebra 1 (with pre-Algebra).

September	October	November	December
Unit 4: Algebra #1	Unit #4: Algebra #1	Unit 4: Algebra #2	*Algebra Review*
(Pre-Algebra) Operations on Integers	*(Pre-Algebra) Variables, Terms & Expressions*	*Multi-Step Equations*	
January	**February**	**March**	**April**
Unit 4: Algebra #3	Unit 4: Algebra #4	Unit 4: Algebra #5	Unit 4: Algebra #6
Rational Numbers & Inequalities	*Graphing*	*Systems of Linear Equations*	*Polynomials*
May	**June**	**July**	**August**
Unit 4: Algebra #7:	Math Camp		Review before starting next level
Quadratics			

The following two pages include a full weekly study schedule.

Algebra 1: Math Lesson Plan – 36 Weeks

Week	Unit/Session	Title	Description	Workbook	Pages	Score
1		Operations on Integers	Prime Factorization	Algebra Workbook #1	1-6	
2			Number Line, + - Numbers		7-23	
3	Unit 4: Session 1 Pre-Algebra		Operations on Integers		24-37	
4		Variables, Terms & Expressions	Exponents	Algebra Workbook #2	1-11	
5			Equivalent Expressions		12-17	
6			Like & Unlike Terms		17-25	
7			Order of Operations		26-36	
8	Pre-Algebra Review					
9		Multi-Step Equations	Solving One-Step Equations	Algebra Workbook #3	1-8	
10	Unit 4: Session 2		Solving Two-Step Equations		9-16	
11			Solving Two-Step Equations		17-23	
12			Word Problems		24-37	
13	Algebra Review					
14		Rational Numbers & Inequalities	Rational Numbers & Lines	Algebra Workbook #4	1-11	
15	Unit 4: Session 3		Inequalities & Absolute Value		12-16	
16			Absolute Value		17-26	
17			Relations & Functions		27-37	
18		Graphing	Coordinate Points	Algebra Workbook #5	1-8	
19	Unit 4: Algebra Session 4		Linear Equations		9-16	
20			Slope-Intercept Form		17-29	
21			Graphing Inequalities		30-36	
22	Algebra Review					
23		Systems of Linear Equations	Linear Equations	Algebra Workbook #6	1-8	
24	Unit 4: Algebra Session 5		Solving with Elimination		9-13	
25			Solving with Substitution		14-28	
26			Systems of Inequalities		29-35	
27		Polynomials	Introducing Polynomials	Algebra Workbook #7	1-12	
28	Unit 4: Algebra Session 6		Factoring Polynomials		13-24	
29			Polynomial Multiplication		25-31	
30			Polynomial Std Form		32-37	
31		Quadratics	Quadratics	Algebra Workbook #8	1-16	
32	Unit 4: Algebra Session 7		Square Roots		17-26	
33			Quadratic Formula		27-31	
34			Graphing Quadratic Functions		32-34	
35					35-38	
36	Algebra Review					

Algebra 1 Math Lesson Plan – 36 Weeks

Fall Term (Sept - Dec)

- Week 1: Prime Factorization (Algebra Workbook #1 Pages 1-6)
- Week 2: Number Line, Positive & Negative Numbers (Algebra Workbook #1 Pages 7-23)
- Week 3: Operations on Integers (Algebra Workbook #1 Pages 24-37)
- Week 4: Exponents (Algebra Workbook #2 Pages 1-11)
- Week 5: Equivalent Expressions (Algebra Workbook #2 Pages 12-17)
- Week 6: Like & Unlike Terms (Algebra Workbook #2 Pages 17-25)
- Week 7: Order of Operations (Algebra Workbook #2 Pages 26-36)
- Week 8: Algebra Review
- Week 9: Solving One-Step Equations (Algebra Workbook #3 Pages 1-8)
- Week 10: Solving Two-Step Equations (Algebra Workbook #3 Pages 9-16)
- Week 11: Solving Two-Step Equations (Algebra Workbook #3 Pages 17-23)
- Week 12: Word Problems (Algebra Workbook #3 Pages 24-37)
- Week 13: Algebra Review

Winter/Spring Term (Jan - May)

- Week 14: Rational Numbers & Number Lines (Algebra Workbook #4 Pages 1-11)
- Week 15: Inequalities & Absolute Value (Algebra Workbook #4 Pages 12-16)
- Week 16: Solving Inequalities with Absolute Value (Algebra Workbook #4 Pages 17-26)
- Week 17: Relations & Functions & Review (Algebra Workbook #4 Pages 27-37)
- Week 18: Coordinate Points (Algebra Workbook #5: Pages 1-8)
- Week 19: Linear Equations (Algebra Workbook #5: Pages 9-16)
- Week 20: Slope-Intercept Form (Algebra Workbook #5: Pages 17-29)
- Week 21: Graphing Inequalities (Algebra Workbook #5: Pages 30-36)
- Week 22: Algebra Review
- Week 23: Systems of Linear Equations (Algebra Workbook #6: Pages 1-8)
- Week 24: Solving with Elimination (Algebra Workbook #6: Pages 9-13)
- Week 25: Solving with Substitution (Algebra Workbook #6: Pages 14-28)
- Week 26: Solving Systems of Inequalities (Algebra Workbook #6: Pages 29-35)
- Week 27: Introducing Polynomials (Algebra Workbook #7: Pages 1-12)
- Week 28: Factoring Polynomials (Algebra Workbook #7: Pages 13-24)
- Week 29: Polynomial Multiplication (Algebra Workbook #7: Pages 25-31)
- Week 30: Polynomial Standard Form (Algebra Workbook #7: Pages 32-37)
- Week 31: Quadratics (Algebra Workbook #8: Pages 1-16)
- Week 32: Quadratics: Square Roots (Algebra Workbook #8: Pages 17-26)
- Week 33: Quadratic Formula (Algebra Workbook #8: Pages 27-31)
- Week 34: Graphing Quadratic Functions (Algebra Workbook #8: Pages 32-34)
- Week 35: Graphing Quadratic Functions (Algebra Workbook #8: Pages 35-38)
- Week 36: Algebra Review

8th Grade Math Curriculum

Eighth-grade math covers algebra concepts, laying the groundwork for high school studies in both *Geometry* and *Algebra 2*. You can use this eighth-grade math curriculum as either your main homeschool program or as a supplement to another homeschool curriculum or a traditional school. The following information will explain the steps you should take to meet your child's 8th grade math goals.

What Math Should an 8th Grader Already Know?

An eighth-grade math curriculum covers more than just basic arithmetic. It dives into several different mathematical areas that are crucial for comprehensive learning. Key topics include number sense and operations, solving equations with one and two variables, polynomials, quadratics, geometric transformations, 3D geometric analysis, metric and standard measurement, theoretical and experimental probability.

Mastering these skills is important to help your student succeed in high school by building upon prior knowledge. Here are the topics that eighth graders should already be familiar with:

1. Representing numbers in word, standard, expanded, and scientific notation
2. Understanding and applying ratios and rates
3. Performing multiplication and division with positive and negative rational numbers
4. Solving and graphing single-variable linear inequalities
5. Determining the perimeter and area of two-dimensional shapes
6. Plotting ordered pairs in all four quadrants
7. Computing experimental & theoretical probabilities
8. Calculating depending and independent probability events

If your student needs to revisit seventh-grade math concepts, our curriculum offers flexible grade-level options, allowing access to lessons in the seventh grade.

What Do 8th Graders Learn in Math?

The major math concepts covered for an eighth-grade curriculum are:

- Algebra: Equations
- Algebra: Inequalities
- Algebra: Graphing
- Algebra: Polynomials
- Algebra: Quadratics

- Geometry: Transformations
- Geometry: Plane Geometry
- Geometry: Surface Area & Volume
- Geometry: Right Angle Triangles
- Data Analysis & Statistics

8th Grade Math Goals and Objectives

By the end of the year, your eighth grader will be able to do the following:

1. Recognize and explain rational and irrational numbers
2. Identify and execute transformations of shapes on a coordinate plane
3. Solve and graph systems of linear equations with two variables
4. Graph quadratic equations and identify solutions
5. Define and distinguish between various sampling techniques
6. Calculate statistical measures of real-world data

Special Note Regarding 7th & 8th Grade Math Schedules

We recommend taking two years to complete both a full year-long Algebra course (which also includes pre-Algebra) and a middle school Geometry course.

Start by covering the first half of Algebra (begin with pre-Algebra) and then move into the first half of Geometry during the 7th grade year. You will cover the second halves of both Algebra and Geometry during the 8th grade year, so by the time students finish their 8th grade year, they will have completed both Algebra 1 and middle school level Geometry, and be ready for either Algebra 2 or High School Geometry (whichever is offered for the 9th grade year for their school).

☑ 7th Grade covers Algebra Sessions 1-4; Geometry: Sessions 1-6; Probability

☑ 8th Grade covers Algebra Sessions 5-7; Geometry: Sessions 7-10; Statistics

☑ You may do Algebra all in one year by going through all sessions of Unit 4: Algebra

☑ Please complete Algebra up through Session #4 (Graphing) before starting Geometry

7ᵀᴴ AND 8ᵀᴴ GRADE STUDY SCHEDULE

This is an example of the two-year schedule that covers the first half of both Algebra 1 (with pre-Algebra) and Geometry along with a course in Probability in the 7th Grade year; the second halves of both Algebra 1 and Geometry along with a course in Statistics in the 8th Grade year.

Grade 7: Pre-Algebra, Algebra 1, Geometry & Probability

September	October	November	December
Unit 4: Algebra #1 *(Pre-Algebra) Operations on Integers*	Unit #4: Algebra #1 *(Pre-Algebra) Variables, Terms & Expressions*	Unit 4: Algebra #2 *Multi-Step Equations*	*Algebra Review*
January Unit 4: Algebra #3 *Inequalities*	**February** Unit 5: Geometry #1 & 2 *Shapes, Lines & Angles*	**March** Unit 5: Geometry #3-6 *Plane Geometry*	**April** Unit 4: Algebra #4 *Graphing*
May Probability *Mini Math Course*	**June** Math Camp	**July**	**August** 8th Grade Review (Partial)

Grade 8: Algebra 1, Geometry & Statistics

September	October	November	December
Unit 4: Algebra #2-4 *Review of Multi-Step Equations, Inequalities & Graphing*	Unit 4: Algebra #5 *Linear Systems of Equations*	Unit 4: Algebra #6 *Polynomials*	*Algebra Review*
January Unit 4: Algebra #7 *Quadratic Equations*	**February** Unit 4: Algebra #7 *Quadratic Equations* Unit 5: Geometry #1 *Transformations*	**March** Unit 5: Geometry #7-8 *3D Geometry: Surface Area & Volume*	**April** Unit 5: Geometry #9-10 *Trigonometry Essentials Mini Math Course*
May Statistics *Mini Math Course*	**June** Math Camp	**July**	**August** 8th Grade Review (Full)

8ᵗʰ Grade Math Lesson Plan – 36 Weeks

Week	Unit/Session	Title	Description	Workbook	Pages	Score
1	Unit 4: Algebra Session 2	Multi-Step Equations	One-Step Equations	Algebra Workbook #3	1-8	
2			Two-Step Equations		9-23	
3	Unit 4: Algebra Session 4	Graphing	Slope-Intercept Form	Algebra Wkbk #5	17-29	
4	Unit 4: Algebra Session 3	Inequalities	Solving Inequalities with Absolute Value	Algebra Wkbk #4	17-26	
5			Graphing Inequalities	Alg Wkbk #5	30-36	
6	Unit 4: Algebra Session 5	Systems of Linear Equations	Linear Equations	Algebra Workbook #6	1-8	
7			Solving with Elimination		9-13	
8			Solving with Substitution		14-28	
9			Systems of Inequalities		29-35	
10	Unit 4: Algebra Session 6	Polynomials	Introducing Polynomials	Algebra Workbook #7	1-12	
11			Factoring Polynomials		13-24	
12			Polynomial Multiplication		25-31	
13			Polynomial Std Form		32-37	
14	Algebra Review					
15	Unit 4: Algebra Session 7	Quadratics	Quadratics	Algebra Workbook #8	1-16	
16			Square Roots		17-26	
17			Quadratic Formula		27-31	
18			Graphing Quadratic Functions		32-34	
19					35-38	
20	Algebra Review					
21	Unit 5: Geo Session 1	Shapes & Constructions	Geometric Transformations	Packet #1 Parts:	1-2,4-6	
22					3, 7	
23	Unit 5: Geo Session 7	Surface Area	Rectangular Prisms	Geometry Workbook #4	1-6	
24			Triangular Prisms		7-11	
25	Unit 5: Geo Session 8	Volume	Prisms & Pyramids		12-13	
26			Cylinders, Spheres		14-19	
27	Geometry Review					
28	Unit 5: Geometry Sessions 9-10	Trigonometry	Angles & Triangles	Geometry Workbook #5	1-15	
29			Sin and Cos Functions		16-21	
30			Tangent Function			
31			Applications			
32	Mini Math Course	Data & Statistics	Mean, Median, Meas Ctr	Statistics Packet Parts:	1-2	
33			Range, IQR, MAD		3-4	
34			Dot Plots & Histograms		5-6	
35			Box Plots & Applications			
36	Full course review					

8th Grade Math Lesson Plan – 36 Weeks

Fall Term (Sept-Dec)

- Week 1: Solving One-Step Equations (Algebra Workbook #3 Pages 1-8)
- Week 2: Solving Two-Step Equations (Algebra Workbook #3 Pages 9-23)
- Week 3: Graphing Slope-Intercept Form (Algebra Workbook #5: Pages 17-29)
- Week 4: Solving Inequalities with Absolute Value (Algebra Workbook #4 Pages 17-26)
- Week 5: Graphing Inequalities (Algebra Workbook #5: Pages 30-36)
- Week 6: Systems of Linear Equations (Algebra Workbook #6: Pages 1-8)
- Week 7: Solving with Elimination (Algebra Workbook #6: Pages 9-13)
- Week 8: Solving with Substitution (Algebra Workbook #6: Pages 14-28)
- Week 9: Solving Systems of Inequalities (Algebra Workbook #6: Pages 29-35)
- Week 10: Introducing Polynomials (Algebra Workbook #7: Pages 1-12)
- Week 11: Factoring Polynomials (Algebra Workbook #7: Pages 13-24)
- Week 12: Polynomial Multiplication (Algebra Workbook #7: Pages 25-31)
- Week 13: Polynomial Standard Form (Algebra Workbook #7: Pages 32-37)
- Week 14: Algebra Review

Winter Term (Jan-March)

- Week 15: Quadratics (Algebra Workbook #8: Pages 1-16)
- Week 16: Quadratics: Square Roots (Algebra Workbook #8: Pages 17-26)
- Week 17: Quadratic Formula (Algebra Workbook #8: Pages 27-31)
- Week 18: Graphing Quadratic Functions (Algebra Workbook #8: Pages 32-34)
- Week 19: Graphing Quadratic Functions (Algebra Workbook #8: Pages 35-38)
- Week 20: Algebra Review
- Week 21: Geometry Transformations Part 1
- Week 22: Geometry Transformations Part 2
- Week 23: Rectangular Prisms (Geometry Workbook #4: Pages 1-6)
- Week 24: Triangular Prisms (Geometry Workbook #4: Pages 7-11)
- Week 25: Prism & Pyramid Volume (Geometry Workbook #4: Pages 12-13)
- Week 26: Cylinder, Cone & Sphere Volume (Geometry Workbook #4: Pages 14-19)
- Week 27: Geometry Review

(continued on next page)

Spring Term (April-May)

- Week 28: Trigonometry 1: Angles and Triangles (Geometry Workbook #5: Pages 1-15)
- Week 29: Trigonometry 2: Sin, Cos Functions (Geometry Workbook #5: Pages 16-21)
- Week 30: Trigonometry 3: Tangent Function
- Week 31: Trigonometry 4: Applications
- Week 32: Data and Statistics (Mean, Median, Measures of Center)
- Week 33: Data and Statistics & Review (Range, IQR, and MAD)
- Week 34: Data and Statistics (Dot Plots & Histograms)
- Week 35: Data and Statistics (Box Plots & Statistics Applications)
- Week 36: Review

Summer Term (June-Aug)

- [10-session Review of all Middle School Content for Graduating 8th Graders!](#)

Completing Algebra 1 in ONE YEAR (instead of two)

The following is for students who are doing a complete Algebra 1 course in one year, starting with pre-Algebra. If you go this route, you will only study algebra so the following year will include a full year of geometry and must also include probability, data and statistics studies.

NOTE: Unit 5 Geometry requires Algebra, so you must complete at least up through Unit 4 Algebra: Session 4 (Graphing) before starting Unit 5: Geometry.

STUDY SCHEDULE: FULL ALGEBRA 1 COURSE

This is an example of the schedule that covers a full year of only Algebra 1 (with pre-Algebra).

September	October	November	December
Unit 4: Algebra #1 *(Pre-Algebra) Operations on Integers*	Unit #4: Algebra #1 *(Pre-Algebra) Variables, Terms & Expressions*	Unit 4: Algebra #2 *Multi-Step Equations*	*Algebra Review*
January Unit 4: Algebra #3 *Rational Numbers & Inequalities*	**February** Unit 4: Algebra #4 *Graphing*	**March** Unit 4: Algebra #5 *Systems of Linear Equations*	**April** Unit 4: Algebra #6 *Polynomials*
May Unit 4: Algebra #7: *Quadratics*	**June** Math Camp	**July**	**August** Review before starting next level

The following two pages include a full weekly study schedule.

Algebra 1: Math Lesson Plan – 36 Weeks

Week	Unit/Session	Title	Description	Workbook	Pages	Score
1	Unit 4: Session 1 Pre-Algebra	Operations on Integers	Prime Factorization	Algebra Workbook #1	1-6	
2			Number Line, + - Numbers		7-23	
3			Operations on Integers		24-37	
4		Variables, Terms & Expressions	Exponents	Algebra Workbook #2	1-11	
5			Equivalent Expressions		12-17	
6			Like & Unlike Terms		17-25	
7			Order of Operations		26-36	
8	Pre-Algebra Review					
9	Unit 4: Session 2	Multi-Step Equations	Solving One-Step Equations	Algebra Workbook #3	1-8	
10			Solving Two-Step Equations		9-16	
11			Solving Two-Step Equations		17-23	
12			Word Problems		24-37	
13	Algebra Review					
14	Unit 4: Session 3	Rational Numbers & Inequalities	Rational Numbers & Lines	Algebra Workbook #4	1-11	
15			Inequalities & Absolute Value		12-16	
16			Absolute Value		17-26	
17			Relations & Functions		27-37	
18	Unit 4: Algebra Session 4	Graphing	Coordinate Points	Algebra Workbook #5	1-8	
19			Linear Equations		9-16	
20			Slope-Intercept Form		17-29	
21			Graphing Inequalities		30-36	
22	Algebra Review					
23	Unit 4: Algebra Session 5	Systems of Linear Equations	Linear Equations	Algebra Workbook #6	1-8	
24			Solving with Elimination		9-13	
25			Solving with Substitution		14-28	
26			Systems of Inequalities		29-35	
27	Unit 4: Algebra Session 6	Polynomials	Introducing Polynomials	Algebra Workbook #7	1-12	
28			Factoring Polynomials		13-24	
29			Polynomial Multiplication		25-31	
30			Polynomial Std Form		32-37	
31	Unit 4: Algebra Session 7	Quadratics	Quadratics	Algebra Workbook #8	1-16	
32			Square Roots		17-26	
33			Quadratic Formula		27-31	
34			Graphing Quadratic Functions		32-34	
35					35-38	
36	Algebra Review					

Algebra 1 Math Lesson Plan – 36 Weeks

Fall Term (Sept - Dec)

- Week 1: Prime Factorization (Algebra Workbook #1 Pages 1-6)
- Week 2: Number Line, Positive & Negative Numbers (Algebra Workbook #1 Pages 7-23)
- Week 3: Operations on Integers (Algebra Workbook #1 Pages 24-37)
- Week 4: Exponents (Algebra Workbook #2 Pages 1-11)
- Week 5: Equivalent Expressions (Algebra Workbook #2 Pages 12-17)
- Week 6: Like & Unlike Terms (Algebra Workbook #2 Pages 17-25)
- Week 7: Order of Operations (Algebra Workbook #2 Pages 26-36)
- Week 8: Algebra Review
- Week 9: Solving One-Step Equations (Algebra Workbook #3 Pages 1-8)
- Week 10: Solving Two-Step Equations (Algebra Workbook #3 Pages 9-16)
- Week 11: Solving Two-Step Equations (Algebra Workbook #3 Pages 17-23)
- Week 12: Word Problems (Algebra Workbook #3 Pages 24-37)
- Week 13: Algebra Review

Winter/Spring Term (Jan - May)

- Week 14: Rational Numbers & Number Lines (Algebra Workbook #4 Pages 1-11)
- Week 15: Inequalities & Absolute Value (Algebra Workbook #4 Pages 12-16)
- Week 16: Solving Inequalities with Absolute Value (Algebra Workbook #4 Pages 17-26)
- Week 17: Relations & Functions & Review (Algebra Workbook #4 Pages 27-37)
- Week 18: Coordinate Points (Algebra Workbook #5: Pages 1-8)
- Week 19: Linear Equations (Algebra Workbook #5: Pages 9-16)
- Week 20: Slope-Intercept Form (Algebra Workbook #5: Pages 17-29)
- Week 21: Graphing Inequalities (Algebra Workbook #5: Pages 30-36)
- Week 22: Algebra Review
- Week 23: Systems of Linear Equations (Algebra Workbook #6: Pages 1-8)
- Week 24: Solving with Elimination (Algebra Workbook #6: Pages 9-13)
- Week 25: Solving with Substitution (Algebra Workbook #6: Pages 14-28)
- Week 26: Solving Systems of Inequalities (Algebra Workbook #6: Pages 29-35)
- Week 27: Introducing Polynomials (Algebra Workbook #7: Pages 1-12)
- Week 28: Factoring Polynomials (Algebra Workbook #7: Pages 13-24)
- Week 29: Polynomial Multiplication (Algebra Workbook #7: Pages 25-31)
- Week 30: Polynomial Standard Form (Algebra Workbook #7: Pages 32-37)
- Week 31: Quadratics (Algebra Workbook #8: Pages 1-16)
- Week 32: Quadratics: Square Roots (Algebra Workbook #8: Pages 17-26)
- Week 33: Quadratic Formula (Algebra Workbook #8: Pages 27-31)
- Week 34: Graphing Quadratic Functions (Algebra Workbook #8: Pages 32-34)
- Week 35: Graphing Quadratic Functions (Algebra Workbook #8: Pages 35-38)
- Week 36: Algebra Review

Completing Geometry in ONE YEAR (instead of two)

The following is for students who wish to study a complete Geometry course in one year.

NOTE: Unit 5 Geometry requires Algebra, so you must complete at least up through Unit 4 Algebra: Session 4 (Graphing) before starting Unit 5: Geometry.

STUDY SCHEDULE: FULL GEOMETRY COURSE

This is an example of the schedule that covers a full year of Geometry (prerequisite: Algebra 1).

September	October	November	December
Unit 5: Geometry #1	Unit #5: Geometry #2	Unit 5: Geometry #3	Unit 5: Geometry #4
Shapes & Constructions	*Angles*	*Triangles*	*Circles*
January	**February**	**March**	**April**
Unit 5: Geometry #5	Unit 5: Geometry #6	Unit 5: Geometry #7	Unit 5: Geometry #8
Plane Geometry	*Similarity*	*Surface Area*	*Volume*
May	**June**	**July**	**August**
Unit 5: #9 & 10:	Probability	Statistics	Full Upper Level Review (Algebra 1 & Geometry)
Right Angle Geometry (Trigonometry Essentials)			

The following three pages include a full weekly study schedule.

Geometry: Math Lesson Plan – 34 Weeks

Week	Unit/Session	Title	Description	Workbook / Assignment	Score
1	Unit 5: Session 1	Shapes & Constructions	Basic Shapes	#1: p. 1-15	
			First Build Challenge*	Eggstronauts	
2			Constructing Shapes	#1: p. 16-33	
				Geometric Designs	
3			Geometric Transformations	Packet #1 Parts 1-2,4-6	
4			Geometric Transformations	Packet #1 Parts 3, 7	
				Foldable Art Project	
				Escape Room	
5	Unit 5: Session 2	Angles	Bisecting & Constructing Shapes	#2: p. 1-21	
			Second Build Challenge*	Flashlight Laser Maze	
6			Types of Angles	Packet #2 Part 1 (Angles)	
				Solve & Color	
				Mazes	
7			Angles in Triangles	Packet #2 Part 2 (Triangles)	
				Card Sort	
				Review Booklet	
8	Unit 5: Session 3	Triangles	Properties of Triangles	#2: p. 22-36	
				Error Analysis	
			Third Build Challenge*	Truss Bridges	
9			Angle & Triangle Review	Task Cards	
				Study Guide & Test	
				Kaleidocycle	
				Hexaflexagon Template	
10	Unit 5: Session 4	Circles	Radius, Diameter, Circumference & Area	#3: p. 1-4	
				Packet #3: Circles	
			Fourth Build Challenge*	Forestry Lab	
11			Properties of Circles	Introductory Activity	
				Circumference Circle Mazes	
				Area Circle Mazes	
				Circle Escape Room	
				Möbius Activity	

*Allow 2-4 weeks to complete Challenges

Week	Unit/Session	Title	Description	Workbook / Assignment	Score
12	Unit 5: Session 5	Plane Geometry	Rectangles & Parallelograms	#3: p. 5-11	
				Packet: Plane p. 1-3	
				Corridor Math Game	
			Fifth Build Challenge*	Spacecraft Lab	
13			Triangles & Trapezoids	#3: p. 12-17	
				Packet: Plane p. 5-7	
				Area of Triangles	
				Spin to Ten Quadrilaterals	
14			Composite Shapes	#3: p. 18-20	
				Packet: Plane p. 9-11	
				Area of Composite Figures	
15			Composite Problem Solving	#3: p. 21-22	
				Packet: Plane p. 13-15	
				Round Table Composites	
			Review	Packet: Plane Quiz p. 17-18	
16	Unit 5: Session 6	Similarity	Intro to Similarity	#3: p. 23-30	
			Similarity	Packet: Similarity p. 1-3	
17			Scale Drawings	Packet: Similarity p. 5-7	
				Scavenger Hunt	
18			Practice with Plane & Similarity	10 Stations Review	
				Fix and Flip Design	
19			Review	Study Guide p.1-3	
				Similarity Test p.4-5	
20	Unit 5: Session 7	Surface Area	Intro to 3D Figures & Nets	Packet: Surf Area p. 1-3	
			Sixth Build Challenge*	Solar Cookies	
			3D Shapes	#4: p. 1-7	
			Rectangular Prisms	Packet: Surf Area p. 5-7	
21			Surface Area: Triangular Prisms	Packet: Surf Area p. 9-11	
				#4: p. 8-9	
				Solve & Color	
			Quiz: Surface Area	Packet: Surf Area p.13-14	
22			Pyramids	Packet: Surf Area p. 15-17	
				#4: p.10-11	
			Prisms & Pyramids	Scavenger Hunt	
				Surface Area Dominoes	
				Surface Area Match Up	
23				Packet: Surf Area p. 19-21	
			Surface Area Applications	28 Station Review	
			Review (Study Guide & Test)	Study Guide Review & Test	

Week	Unit/Session	Title	Description	Workbook / Assignment	Score
24	Unit 5: Session 8	Volume	Cross Sections of 3D Figures	Packet: Volume p. 1-3	
				Cross Section Card Sort	
			Volume of Rectangular Prisms	Packet: Volume p. 5-7	
				#4: p. 12	
				Two Mazes	
			Seventh Build Challenge*	Geology Rock Hound	
25			Volume of Triangular Prisms	Packet: Volume p. 9-11	
				#4: p.13	
				Cut and Paste Activity	
				Scavenger Hunt	
26			Review Quiz	Packet: Volume p. 13-14	
			3D Composite Prisms	Packet: Volume p. 15-17	
				Error Analysis	
			Volume of Cylinders & Spheres	#4: p. 14-17	
27			Applications of Volume	Packet: Volume p. 19-21	
				Task Cards	
			Review	Study Guide p. 1-3	
				Volume Test p. 5-6	
				#4: p. 18-19	
28	Unit 5: Sessions 9 & 10	Right Angle Geometry	Review: Angles, Triangles & Pythagorean Theorem	#5: p.1-15	
				Scavenger Hunt	
29			Trigonometric Functions: Sine & Cosine	#5: p.16-21	
				Guided Notes p. 1-11	
				Activity: Sum 'Em Up	
30			Trigonometric Functions: Sine, Cosine & Tangent	Guided Notes p.12-19	
				8 Stations	
31			Applications	#5: p. 22-24	
				Guided Notes p. 20-22	
32	Review: Upper Level (Algebra & Geometry): 10 sessions			Review Packet	
33					
34	Standardized Geometry Test			Grades 7-8th Standardized Test	

*Allow 2-4 weeks to complete Challenges