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.

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

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

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

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

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

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

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

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

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

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

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

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

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

• <u>Series of 10 Full Review Sessions</u>

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

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

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

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

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

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

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
				Geometry Pages 1-16	
	Geometry Session #1:	A 11	25	BINGO: Lines & Rays	
	Basic Concepts	All	25	BINGO: Shapes & Figures	
				Biscuits	
	Geometry Session #2:			Geometry Pages 17-31	
	Rectangles,	All	26	Packet #1	
	Parallelograms,	All	20	Modeling Area Booklet	
	Triangles & Trapezoids			Floating Paperclip	
				Geometry Pages 32-36	
				Packet #2	
	C			Area of Shapes Coloring	
	Geometry Session #3:	All	27	Spin to Ten	
	Composite Shapes			BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
		All		Geometry Pages 37-40	
			28	Geom. TEST Pages 41-42	
				Packet #3	
	Geometry Session #4:			Area of a Circle Activity	
	Circles			Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	
				Packet #4	
				Folding a Cube	
				Surface Area Cut & Paste	
	Geometry Session #5:	All	29	Guess My Figure?	
	3D Figures & Nets			Coin Game	
				Loops & Rings	
				Quiz #2	
				Packet #5	
				28 Task Cards	
				Scavenger Hunt	
	Geometry Session #6:	All	30	Teeko	
	Volume			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
			31	#1: Pages 1-23	
	Pre-Algebra Session #1:	All		Number Challenge	
	Operations on Integers	All	21	Integer Operations	
				Word Search	
				#1: Pages 24-35	
				#1: TEST Pages 36-37	
	Pre-Algebra Session #2:	All	32	Packet #1 Pages 1-3	
	Operations on Integers	All	32	Math Lib	
				Task Cards	
				Scavenger Hunt	
	Dec Alexies Constanting			#2: Pages 1-15	
	Pre-Algebra Session #3:			Packet #1 Pages 7-9	
	Variables, Terms &	All	33	Exploring Exponents	
	Expressions			Mazes	
				#2: Pages 16-36	
	Pre-Algebra Session #4:		24	Packet #1 Page 13	
	Variables, Terms &	All	34	Pyramid Puzzle	
	Expressions			Distributive Puzzle	
				#3: Pages 1-8	
				#3: Pages 9-15	
				Packet #1 Pages 15-16	
	Due Aleshue Coosieu #Ev			Triples	
	Pre-Algebra Session #5:	All	35	8 Stations	
	Graphing Ordered Pairs			Scavenger Hunt	
	-			Geography Basics Handout	
				Globe Trotting Gnomes	
				Geography Battleship	
	Full Review Session	All	36	6 th 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

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

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

- <u>Session #5:</u> Percent Error (Beginner & Intermediate Level)
- <u>Session #6:</u> Simple & Compound Interest (Beginner Level)
- <u>Session #6:</u> Simple & Compound Interest (Intermediate Level)
- <u>Session #7:</u> Review (Beginner & Intermediate Level)

Spring Term: Geometry (March-April)

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

Spring Term: Pre-Algebra (April-May)

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

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

• <u>Series of 10 Full Review Sessions</u>

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

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

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
			1	#1: Pages 1-9	
	_	Beginner	2	#1: Pages 10-18	
			2	Scavenger Hunt	
	Percent Session #1:			Creative Art Project	
	Introduction to Percent		2	BINGO Percent	
	& Personal Finances		3	Ratios & Proportions Packet #1	
	Part 1	Intermediate		Scavenger Hunt	
				Percent & Proportions Packet	
			4	Converting Fractions, Decimals	
				& Percent	
			5	#1: Pages 19-26	
				#1: Pages 27-38	
		Beginner	C	#1: TEST Pages 39-40	
	Percent Session #2:		6	Trifold Project	
	Percent Proportion			Conversion Maze	
	& Personal Finances		7	Percent Packet #2	
	Part 2	Intermediate	8	Better Buy Tacos	
	-			Go Fish!	
				Proportion Maze	
			9	#2: Pages 1-11	
		Destaura		#2: Pages 12-16	
	Percent Session #3:	<u>Beginner</u>		#2: Pages 17-22	
	Multi-Step Percent		10	Matchup Cards	
	Calculations		11	Percent Packet #3	
	& Personal Finances			Discount & Sales	
	Part 3	Intermediate	10	Daisy's Donuts	
			12	Better Buy Movies	
				Squares Game	
				#2: Pages 23-30	
		Destaura	12	#2: Pages 31-41	
		<u>Beginner</u>	13	#2: TEST Pages 42-43	
	Percent Session #4:			Matching Game	
	Percent Change			Percent Packet #4	
	& Business Math Part			Quick Quiz	
		Intermediate	14	Gummy Bear Lab	
				Height & Weight Change	
				Scavenger Hunt	
l			1	- 0	

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

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
		<u>Beginner</u>	15	#3: Pages 1-13	
	Percent Session #5:			Percent Packet #5	
	Percent Error &	Intermediate	16	Error Practice Problems	
	Business Math Part 2	Intermediate	10	Error Guessing Game	
				Calculating Speedometers	
		Poginnor	17	#3: Pages 14-23	
		<u>Beginner</u>	17	Notebook Activity	
	Demont Cossien #C.		18	Percent Packet #6	
	Percent Session #6:			Simple Triangle Puzzle	
	Simple & Compound Interest & Business	Intermediate	19 20	Simple Mad Lib Practice	
	Math Part 3			Simple Foldable Activity	
				Compound Notebook	
				Flipbooks	
				Maze Practice	
			21	#3: Pages 24-39	
		Beginner	22	#3: TEST Pages 40-41	
	Percent Session #7:		22	Mini Escape Room	
	Percent Unit Review		23	Study Packet	
	& Business Math Part 4	teste and a discus	25	Review Packet	
		Intermediate	24	Test Packet	
			24	Escape Room Review	

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

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
				Geometry Pages 1-16	
	Geometry Session #1:	All	25	BINGO: Lines & Rays	
	Basic Concepts		25	BINGO: Shapes & Figures	
				Biscuits	
	Geometry Session #2:			Geometry Pages 17-31	
	Rectangles,		26	Packet #1	
	Parallelograms,	All	26	Modeling Area Booklet	
	Triangles & Trapezoids			Floating Paperclip	
				Geometry Pages 32-36	
				Packet #2	
				Area of Shapes Coloring	
	Geometry Session #3:	All	27	Spin to Ten	
	Composite Shapes			BINGO Composite Figures	
				Trading Corks	
				Quiz #1	
		All		Geometry Pages 37-40	
			28	Geom. TEST Pages 41-42	
				Packet #3	
	Geometry Session #4:			Area of a Circle Activity	
	Circles			Circles & Mazes	
				Solve & Color	
				Circle BINGO	
				Center the Cork	
				Packet #4	
				Folding a Cube	
				Surface Area Cut & Paste	
	Geometry Session #5:	All	29	Guess My Figure?	
	3D Figures & Nets			Coin Game	
				Loops & Rings	
				Quiz #2	
				Packet #5	
				28 Task Cards	
	Geometry Session #6:			Scavenger Hunt	
		All	30	Teeko	
	Volume			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
				#1: Pages 1-23	
	Pre-Algebra Session #1:	All	31	Number Challenge	
	Operations on Integers	All	21	Integer Operations	
				Word Search	
				#1: Pages 24-35	
				#1: TEST Pages 36-37	
	Pre-Algebra Session #2:	All	22	Packet #1 Pages 1-3	
	Operations on Integers	All	32	Math Lib	
				Task Cards	
				Scavenger Hunt	
	Dec Alexies Constanting			#2: Pages 1-15	
	Pre-Algebra Session #3:		33	Packet #1 Pages 7-9	
	Variables, Terms &	All		Exploring Exponents	
	Expressions			Mazes	
	Dec Alexies Constant #4			#2: Pages 16-36	
	Pre-Algebra Session #4:		24	Packet #1 Page 13	
	Variables, Terms &	All	34	Pyramid Puzzle	
	Expressions			Distributive Puzzle	
				#3: Pages 1-8	
				#3: Pages 9-15	
				Packet #1 Pages 15-16	
	Due Aleshue Coosieu #Ev			Triples	
	Pre-Algebra Session #5:	All	35	8 Stations	
	Graphing Ordered Pairs			Scavenger Hunt	
	-			Geography Basics Handout	
				Globe Trotting Gnomes	
				Geography Battleship	
	Full Review Session	All	36	6 th Grade Review Session	

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

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

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

OPTIONAL: Percent Labs (7-10 weeks)