

## CMP4 Units by Grade Level

	GRADE 6	GRADE 7	GRADE 8 or High School Course 1	
Unit	<b>Mathematical Focus:</b> Generalizing patterns with a focus on algebra and number	<b>Mathematical Focus:</b> Proportional reasoning in the context of number, similarity, algebra, measurement, probability, and statistics	<b>Mathematical Focus:</b> Formalizing patterns of change, relationships, and transformations Grade 8: Shortened Pathway HS Course I: All Problems	
1	Variables and Patterns: Introducing Algebraic Reasoning	Shapes and Designs: Generalizing and Using Properties of Geometric Shapes	Thinking with Mathematical Models: Linear Functions and Bivariate Data	
2	Number Connections: Expressing Factors and Multiples Algebraically	Completely Rational: A Focus on Integers	Looking for Pythagoras: The Pythagorean Theorem and Real Numbers	
3	Comparing Quantities: Ratios, Rates, and Equivalence	Stretching and Shrinking: Proportional Reasoning in the Context of Similarity (Scale Drawings)	Growing, Growing, Growing: Linear Versus Exponential Patterns of Change	
4	Bits of Rational: Extending Fraction Operations and Solving Equations	Comparing and Scaling: Proportional Reasoning in the Context of Number	Mars, Gravity, and Painted Cubes: Linear Versus Quadratic Patterns of Change	
5	Covering and Surrounding: Two- and Three-Dimensional Measurement	Moving Straight Ahead: Linear Relationships: Expressions and Equations	Flip, Spin, Slide, and Stretch: Exploring Transformations	
6	Points of Rational: A Focus on Decimals and Algebraic Reasoning	How Likely Is It?: Proportional Relationships in the Context of Probability	Say It with Symbols: Reasoning with Equivalent Expressions and Equations	
7	Data About Us: Statistics and Data Analysis	Filling and Wrapping: Two- and Three-Dimensional Measurement	It's in the System: Systems of Linear Equations and Inequalities	
8		Samples and Populations: Making Comparisons and Predictions	Function Junction: A Deeper Look at Algebra and Functions	
	7 units 26 investigations 84 problems	8 units 27 investigations 88 problems	8 <sup>th</sup> grade: 8 units 29 investigations 88 problems	HS 1: 8 units 32 investigations 112 problems

**Changes from CMP3 to CMP4**

GRADE 6		GRADE 7		GRADE 8 High School Course 1	
<b>Mathematical Focus:</b> Generalizing patterns with a focus on algebra and number		<b>Mathematical Focus:</b> Proportional reasoning in the context of number, similarity, algebra, measurement, probability, and statistics		<b>Mathematical Focus:</b> Formalizing patterns of change, relationships, and transformations	
CMP3 Problem Count 103	CMP4 Problem Count 84	CMP3 Problem Count 116	CMP4 Problem Count 88	CMP3 Problem Count 136 (102 for G8)	CMP4 Problem Count 112 (88 for G8 13.7% reduction)
<b>81.5% or 18.5% reduction</b>		<b>75.9% or 24.1% reduction</b>		<b>82.4% or 17.6% reduction</b>	

# Pathways for Grade 8 and Algebra I/High School Course 1 in Grade 8

Unit	Grade 8	Algebra I/High School Course 1
<i>Thinking with Mathematical Models</i>	All 14 problems	All 14 problems
<i>Looking for Pythagoras</i>	14 problems with optional choices of Problems 4.2, 4.3	All 16 problems
<i>Growing, Growing, Growing</i>	11 problems with optional choices of Problems 3.2, 3.3, 3.4, 4.4	All 15 problems
<i>Mars, Gravity, and Painted Cubes</i>	10 problems with optional choices of Problems 3.1, 3.2, 4.1	All 13 problems
<i>Flip, Spin, Slide, and Stretch</i>	All 14 problems	All 14 problems
<i>Say It with Symbols</i>	11 problems with optional choices of Problems 1.4, 2.1, 3.3	All 14 problems
<i>It's in the System</i>	6 problems with optional choices of Problems 3.1, 3.2, 3.3, 4.1, 4.2, 4.3, 4.4, Partner Quiz, Mathematical Reflection 3, Mathematical Reflection 4	All 13 problems
<i>Function Junction</i>	8 problems with optional choices of Problems 3.1, 3.2, 3.3, 4.1, 4.2, Mathematical Reflection 3, Checkup 2, Unit Test	All 13 problems
Total Problems	88	112