

## Scope and Sequence for CMP2

Deep understanding of the concepts and skills are developed in the units listed. In some cases, the topics are introduced in one unit and more fully developed in a later unit. In other cases, the topics are revisited in the same or other units in Connections questions, or are used to develop understanding of new concepts. The development

of a concept includes understanding relationships among and between concepts, as well as developing skills, procedures, and algorithms.

As a problem solving curriculum, every unit helps students develop a variety of strategies for solving problems, such as building models, making lists and tables, drawing diagrams, and solving simpler problems.

Key: I = introduced    M = mastered    R = reinforced; applied

Number and Operations			
	Grade 6	Grade 7	Grade 8
<b>Whole Numbers</b>			
divisors, factors, greatest common factor	<i>Prime Time</i> IM <i>Bits and Pieces I</i> R <i>Shapes and Designs</i> R <i>Covering and Surrounding</i> R <i>Data About Us</i> R	<i>Variables and Patterns</i> R <i>Comparing and Scaling</i> R <i>Accentuate the Negative</i> R <i>Filling and Wrapping</i> R	<i>Thinking With Mathematical Models</i> R <i>Growing, Growing, Growing</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>Say It with Symbols</i> R
divisibility rules	<i>Prime Time</i> IM		<i>Growing, Growing, Growing</i> R <i>Say It with Symbols</i> R
multiples, least common multiple	<i>Prime Time</i> IM <i>Bits and Pieces I</i> R <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>Data About Us</i> R	<i>Comparing and Scaling</i> R	
even, odd numbers	<i>Prime Time</i> IM	<i>Variables and Patterns</i> R	<i>Say It With Symbols</i> R
prime numbers	<i>Prime Time</i> IM	<i>Filling and Wrapping</i> R	<i>Growing, Growing, Growing</i> R <i>Say It with Symbols</i> R
composite numbers	<i>Prime Time</i> IM		
squares	<i>Prime Time</i> IM <i>Shapes and Designs</i> R <i>Covering and Surrounding</i> R	<i>Stretching and Shrinking</i> R	<i>Looking for Pythagoras</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>Say It with Symbols</i> R
square roots	<i>Prime Time</i> I	<i>Stretching and Shrinking</i> I	<i>Looking for Pythagoras</i> IM
prime factorization	<i>Prime Time</i> IM <i>Shapes and Designs</i> R		<i>Growing, Growing, Growing</i> R
place value	<i>Prime Time</i> R <i>Bits and Pieces I</i> R	<i>Data Around Us</i> R <i>Data Distributions</i> R	

## Number and Operations (cont.)

	Grade 6	Grade 7	Grade 8
<b>Decimals</b>			
place value	<i>Bits and Pieces I</i> IM <i>Bits and Pieces III</i> R	<i>Data Distributions</i> R	<i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i>
models (including grids and number lines)	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>Data About Us</i> R	<i>Variables and Patterns</i> R <i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With</i> <i>Mathematical Models</i> R <i>Looking for Pythagoras R</i> <i>The Shapes of Algebra</i> R
comparing and ordering	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Covering and Surrounding</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Variables and Patterns</i> R <i>Comparing and Scaling</i> R <i>Accentuate the Negative</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With</i> <i>Mathematical Models</i> R <i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i> <i>The Shapes of Algebra</i> R <i>Samples and Populations</i> R
related to fractions and percents	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R <i>Data About Us</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>Filling and Wrapping</i> R <i>Data Distributions</i> R	<i>Thinking With</i> <i>Mathematical Models</i> R <i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i>
terminating and repeating decimals	<i>Bits and Pieces III</i> IM		<i>Looking for Pythagoras</i> R
estimating/benchmarks	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R	<i>Comparing and Scaling</i> R <i>Filling and Wrapping</i> R <i>Data Distributions</i> R	<i>Looking for Pythagoras</i> R
rounding	<i>Bits and Pieces I</i> IM <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Filling and Wrapping</i> R <i>Data Distributions</i> R	<i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i>
scientific notation		see also <i>Data Around Us</i> ©2004 IM	<i>Growing, Growing,</i> <i>Growing</i> IM
operations with	<i>Bits and Pieces III</i> IM <i>How Likely Is It?</i> R <i>Data About Us</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>Accentuate the Negative</i> R <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With</i> <i>Mathematical Models</i> R <i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i> <i>Samples and Populations</i> R
<b>Fractions</b>			
comparing and ordering	<i>Bits and Pieces I</i> IM <i>Shapes and Designs</i> R <i>Bits and Pieces II</i> R <i>Covering and Surrounding</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Variables and Patterns</i> R <i>Comparing and Scaling</i> R <i>Accentuate the Negative</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With</i> <i>Mathematical Models</i> R <i>Looking for Pythagoras R</i> <i>Growing, Growing,</i> <i>Growing R</i> <i>The Shapes of Algebra</i> R <i>Samples and Populations</i> R

## Number and Operations (cont.)

	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
related to decimals and percents	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R <i>Data About Us</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With Mathematical Models</i> R <i>Looking for Pythagoras</i> R <i>Growing, Growing, Growing</i> R
equivalent	<i>Bits and Pieces I</i> IM <i>Shapes and Designs</i> R <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>Moving Straight Ahead</i> R <i>What Do You Expect?</i> R	<i>Growing, Growing, Growing</i> R <i>Samples and Populations</i> R
estimating/benchmarks	<i>Bits and Pieces I</i> IM <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Samples and Populations</i> R
models	<i>Bits and Pieces I</i> IM <i>Shapes and Designs</i> R <i>Bits and Pieces II</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R	<i>Comparing and Scaling</i> R <i>Filling and Wrapping</i> R <i>What Do You Expect?</i> R	<i>Looking for Pythagoras</i> R
reciprocals	<i>Bits and Pieces II</i> IM	<i>Moving Straight Ahead</i> R	<i>Thinking With Mathematical Models</i> R
operations with	<i>Bits and Pieces I</i> I <i>Shapes and Designs</i> I <i>Bits and Pieces II</i> IM <i>Covering and Surrounding</i> R <i>Bits and Pieces III</i> R <i>How Likely Is It?</i> R <i>Data About Us</i> R	<i>Variables and Patterns</i> R <i>Stretching and Shrinking</i> R <i>Accentuate the Negative</i> R <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With Mathematical Models</i> R <i>Looking for Pythagoras</i> R <i>Growing, Growing, Growing</i> R <i>Say It with Symbols</i> R
<b>Ratio and Proportion</b>			
ratios, rates, unit rates	<i>Bits and Pieces I</i> I <i>Shapes and Designs</i> I <i>Bits and Pieces II</i> I <i>Bits and Pieces III</i> I <i>How Likely Is It?</i> I <i>Data About Us</i> I	<i>Variables and Patterns</i> I <i>Stretching and Shrinking</i> I <i>Comparing and Scaling</i> IM <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R <i>Data Distributions</i> R	<i>Thinking With Mathematical Models</i> R <i>Looking for Pythagoras</i> R <i>Growing, Growing, Growing</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>The Shapes of Algebra</i> R <i>Samples and Populations</i> R
equivalent ratios	<i>Bits and Pieces I</i> I <i>Shapes and Designs</i> I <i>Bits and Pieces II</i> I <i>Bits and Pieces III</i> I <i>How Likely Is It?</i> I	<i>Stretching and Shrinking</i> IM <i>Comparing and Scaling</i> R <i>Moving Straight Ahead</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With Mathematical Models</i> R <i>Looking for Pythagoras</i> R <i>Growing, Growing, Growing</i> R <i>Samples and Populations</i> R

## Number and Operations (cont.)

	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
proportions	<i>Bits and Pieces I I</i> <i>Bits and Pieces II I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i>	<i>Stretching and Shrinking I</i> <i>Comparing and Scaling IM</i> <i>Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R</i>
comparing proportional and nonproportional relationships	<i>Bits and Pieces I I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>Variables and Patterns I</i> <i>Stretching and Shrinking I</i> <i>Comparing and Scaling IM</i> <i>Moving Straight Ahead R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i>
scaling/scale factors	<i>Bits and Pieces I I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i>	<i>Stretching and Shrinking IM</i> <i>Comparing and Scaling R</i> <i>What Do You Expect? R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
scale factors with similar 3-dimensional figures		<i>Filling and Wrapping IM</i>	
estimating	<i>Bits and Pieces I I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>Stretching and Shrinking I</i> <i>Comparing and Scaling IM</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i>
proportional reasoning	<i>Bits and Pieces I I</i> <i>Bits and Pieces II I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i>	<i>Variables and Patterns I</i> <i>Stretching and Shrinking I</i> <i>Comparing and Scaling IM</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
<b>Percents</b>			
related to fractions and decimals	<i>Bits and Pieces I IM</i> <i>Bits and Pieces II R</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>
models	<i>Bits and Pieces I IM</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i>	<i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>What Do You Expect? R</i>	<i>Samples and Populations R</i>

## Number and Operations (cont.)

	Grade 6	Grade 7	Grade 8
estimating/benchmarks	<i>Bits and Pieces I IM</i> <i>Bits and Pieces II R</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Samples and Populations R</i>
finding (and solving $x\%$ of $y = z$ )	<i>Bits and Pieces I I</i> <i>Bits and Pieces III IM</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>Variables and Patterns R</i> <i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Growing, Growing, Growing R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
percent of a number	<i>Bits and Pieces I I</i> <i>Bits and Pieces III IM</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Growing, Growing, Growing R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>
solving problems with	<i>Bits and Pieces III IM</i> <i>How Likely Is It? R</i>	<i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Growing, Growing, Growing R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>
<b>Integers</b>			
models	<i>Bits and Pieces II I</i>	<i>Accentuate the Negative IM</i> <i>Data Distributions R</i>	<i>The Shapes of Algebra R</i>
opposites/inverse operations		<i>Accentuate the Negative IM</i> <i>Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
absolute value		<i>Accentuate the Negative IM</i>	
comparing and ordering		<i>Accentuate the Negative IM</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>The Shapes of Algebra R</i>
on a number line	<i>Bits and Pieces II I</i>	<i>Accentuate the Negative IM</i> <i>What Do You Expect? R</i>	<i>Thinking With Mathematical Models R</i> <i>The Shapes of Algebra R</i>
operations with		<i>Accentuate the Negative IM</i> <i>Moving Straight Ahead R</i> <i>What Do You Expect? R</i>	<i>Thinking With Mathematical Models R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
solving problems with	<i>Bits and Pieces II I</i>	<i>Accentuate the Negative IM</i>	<i>Say It with Symbols R</i>

## Number and Operations (cont.)

	Grade 6	Grade 7	Grade 8
<b>Irrational Numbers</b>			
models	<i>Covering and Surrounding I How Likely Is It? I</i>	<i>Filling and Wrapping I</i>	<i>Looking for Pythagoras IM</i>
pi	<i>Covering and Surrounding IM Bits and Pieces III R How Likely Is It? R</i>	<i>Variables and Patterns R Filling and Wrapping R</i>	<i>Looking for Pythagoras R</i>
Pythagorean Theorem			<i>Looking for Pythagoras IM Kaleidoscopes, Hubcaps, and Mirrors R The Shapes of Algebra R</i>
square roots	<i>How Likely Is It? I</i>		<i>Looking for Pythagoras IM The Shapes of Algebra R</i>
estimating			<i>Looking for Pythagoras IM The Shapes of Algebra R</i>
<b>Real Numbers</b>			
	<i>Prime Time I</i>		
defined			<i>Looking for Pythagoras IM</i>
Order of Operations		<i>Accentuate the Negative IM Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Frogs, Fleas, and Painted Cubes R Say It with Symbols R</i>
exponential form (notation)	<i>Prime Time IM Bits and Pieces III R</i>	<i>Variables and Patterns R Stretching and Shrinking R Accentuate the Negative R</i>	<i>Growing, Growing, Growing R Say It with Symbols R The Shapes of Algebra R</i>
laws of exponents			<i>Growing, Growing, Growing IM Say It with Symbols R</i>
<b>Properties</b>			
distributive	<i>Bits and Pieces II I Covering and Surrounding I Bits and Pieces III I</i>	<i>Accentuate the Negative IM Moving Straight Ahead R</i>	<i>Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
commutative	<i>Prime Time I</i>	<i>Accentuate the Negative IM Moving Straight Ahead R</i>	<i>Say It with Symbols R</i>
associative		<i>Accentuate the Negative I</i>	<i>Say It with Symbols IM</i>

## Data Analysis and Probability

	Grade 6	Grade 7	Grade 8
<b>Data Investigation</b>			
Note: Opportunities for students to question, collect, analyze, and interpret data occur in almost every unit.			
collecting data	<i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Variables and Patterns R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Samples and Populations R</i>
analyze data	<i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Variables and Patterns R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Samples and Populations R</i>
interpret data	<i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Variables and Patterns R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Samples and Populations R</i>
samples	<i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>What Do You Expect? I</i>	<i>Samples and Populations IM</i>
randomness	<i>How Likely Is It? IM</i>	<i>What Do You Expect? R</i>	<i>Samples and Populations R</i>
draw conclusions/make predictions	<i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>What Do You Expect? R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Samples and Populations R</i>
compare data	<i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Moving Straight Ahead I</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? I</i> <i>Data Distributions IM</i>	<i>Thinking with Mathematical Models R</i> <i>Samples and Populations R</i>
conduct surveys	<i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>Data Distributions I</i>	<i>Samples and Populations R</i>
evaluate methods of sampling	<i>How Likely Is It? I</i> <i>Data About Us I</i>	<i>What Do You Expect? I</i> <i>Data Distributions I</i>	<i>Samples and Populations IM</i>
<b>Data Representation</b>			
Note: Opportunities for students to read, create, or use tables occur in almost every unit.			
line plots	<i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Variables and Patterns R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Samples and Populations R</i>

## Data Analysis and Probability (cont.)

	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
single, double, stacked bar graphs	<i>Bits and Pieces I I</i> <i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Comparing and Scaling R</i> <i>Data Distributions R</i>	<i>Growing, Growing, Growing R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
stem-and-leaf plots	<i>Data About Us IM</i>	<i>Data Distributions R</i>	<i>Samples and Populations R</i>
coordinate graphs	<i>Covering and Surrounding I</i> <i>Data About Us I</i>	<i>Variables and Patterns IM</i> <i>Comparing and Scaling R</i> <i>Accentuate the Negative R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It With Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
tables	<i>Shapes and Designs R</i> <i>Covering and Surrounding I</i> <i>Data About Us IM</i>	<i>Variables and Patterns IM</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking with Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It With Symbols R</i> <i>Samples and Populations R</i>
frequency tables	<i>Data About Us IM</i> <i>How Likely Is It? R</i>	<i>Comparing and Scaling R</i> <i>Data Distributions R</i>	
circle graphs (pie charts)	<i>Bits and Pieces III I</i> <i>Data About Us R</i>	<i>Data Distributions R</i>	<i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
histograms			<i>Samples and Populations IM</i>
box-and-whisker plots (box plots)			<i>Samples and Populations IM</i>
scatter plots	<i>Data About Us I</i>	<i>Variables and Patterns I</i> <i>Data Distributions IM</i>	<i>Thinking with Mathematical Models R</i> <i>Samples and Populations R</i>
analyze trends/trend lines	<i>Data About Us I</i>	<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Moving Straight Ahead I</i> <i>Data Distributions I</i>	<i>Thinking with Mathematical Models IM</i> <i>Samples and Populations R</i>
decide on appropriateness and effectiveness	<i>Bits and Pieces III I</i> <i>How Likely Is It? I</i> <i>Data About Us IM</i>	<i>Comparing and Scaling R</i> <i>Data Distributions R</i>	<i>Samples and Populations R</i>

<b>Data Analysis and Probability (cont.)</b>			
	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<b>Describing Data</b>			
mode	<i>Data About Us</i> IM	<i>Data Distributions</i> R	<i>Samples and Populations</i> R
median	<i>Data About Us</i> IM	<i>Variables and Patterns</i> R <i>Accentuate the Negative</i> R <i>Data Distributions</i> R	<i>Samples and Populations</i> R
mean (average)	<i>Bits and Pieces III</i> I <i>Data About Us</i> IM	<i>Variables and Patterns</i> R <i>Accentuate the Negative</i> R <i>Data Distributions</i> R	<i>Thinking with Mathematical Models</i> IM <i>Samples and Populations</i> R
range	<i>Data About Us</i> IM	<i>Accentuate the Negative</i> R <i>Data Distributions</i> R	<i>Samples and Populations</i> R
outliers	<i>Data About Us</i> I	<i>Data Distributions</i> I	<i>Samples and Populations</i> IM
shape of data	<i>Data About Us</i> I	<i>Data Distributions</i> IM	<i>Samples and Populations</i> R
data distribution	<i>Data About Us</i> I	<i>Data Distributions</i> IM	<i>Samples and Populations</i> R
quartiles, interquartile range (IQR)			<i>Samples and Populations</i> IM
maximum, minimum	<i>Covering and Surrounding</i> I	<i>Data Distributions</i> IM	<i>Frogs, Fleas, and Painted Cubes</i> R <i>Samples and Populations</i> R
choose the best summary statistic and representation	<i>Data About Us</i> IM	<i>Data Distributions</i> R	<i>Samples and Populations</i> R
<b>Probability</b>			
predicting, computing	<i>How Likely Is It?</i> IM	<i>Variables and Patterns</i> R <i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R <i>Data Distributions</i> R	<i>Thinking With Mathematical Models</i> R <i>The Shapes of Algebra</i> R <i>Samples and Populations</i> R
equally and unequally likely outcomes	<i>How Likely Is It?</i> IM	<i>What Do You Expect?</i> R	<i>The Shapes of Algebra</i> R
certain, possible, impossible events	<i>How Likely Is It?</i> IM	<i>What Do You Expect?</i> R	
experimental	<i>How Likely Is It?</i> IM	<i>Variables and Patterns</i> R <i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R	
theoretical	<i>How Likely Is It?</i> IM	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>What Do You Expect?</i> R	
dependent and independent events		<i>What Do You Expect?</i> IM	
expected value	<i>How Likely Is It?</i> I	<i>What Do You Expect?</i> IM	
fair and unfair games	<i>How Likely Is It?</i> IM	<i>What Do You Expect?</i> R	

## Data Analysis and Probability (cont.)

	Grade 6	Grade 7	Grade 8
lists, charts, tree diagrams, area models	<i>How Likely Is It?</i> I	<i>Variables and Patterns</i> I <i>Stretching and Shrinking</i> I <i>Comparing and Scaling</i> I <i>What Do You Expect?</i> IM	
counting techniques	<i>How Likely Is It?</i> I	<i>What Do You Expect?</i> IM	<i>Say It with Symbols</i> R see also <i>Clever Counting</i> ©2004 M
simulations/experiments	<i>How Likely Is It?</i> IM	<i>Variables and Patterns</i> R <i>Moving Straight Ahead</i> R <i>What Do You Expect?</i> R	<i>Thinking With Mathematical Models</i> R <i>Growing, Growing, Growing</i> R <i>Samples and Populations</i> R

## Measurement

### Angles

estimating	<i>Shapes and Designs</i> IM <i>Bits and Pieces</i> III R <i>How Likely Is It?</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R <i>Data Distributions</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
measuring	<i>Shapes and Designs</i> IM <i>Bits and Pieces</i> III R <i>How Likely Is It?</i> R	<i>Stretching and Shrinking</i> R <i>Comparing and Scaling</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
of similar polygons	<i>Shapes and Designs</i> I	<i>Stretching and Shrinking</i> IM <i>Comparing and Scaling</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
triangle, special right			<i>Looking for Pythagoras</i> IM

### Perimeter

polygons	<i>Shapes and Designs</i> I <i>Covering and Surrounding</i> IM <i>Bits and Pieces</i> III R	<i>Variables and Patterns</i> R <i>Stretching and Shrinking</i> R <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R	<i>Thinking With Mathematical Models</i> R <i>Looking for Pythagoras</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>Say It with Symbols</i> R <i>The Shapes of Algebra</i> R
circles (circumference)	<i>Covering and Surrounding</i> IM <i>Bits and Pieces</i> III R	<i>Variables and Patterns</i> R <i>Stretching and Shrinking</i> R <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R	<i>Growing, Growing, Growing</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>Say It with Symbols</i> R <i>The Shapes of Algebra</i> R
irregular polygons	<i>Covering and Surrounding</i> IM <i>Bits and Pieces</i> III R	<i>Stretching and Shrinking</i> R <i>Filling and Wrapping</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>Say It with Symbols</i> R

### Measurement (cont.)

	Grade 6	Grade 7	Grade 8
constant perimeter, changing area	<i>Covering and Surrounding IM</i>	<i>Variables and Patterns R Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Frogs, Fleas, and Painted Cubes R Say It with Symbols R</i>
relationships of sides and perimeters of similar figures		<i>Stretching and Shrinking IM Comparing and Scaling R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R The Shapes of Algebra R</i>
<b>Area</b>			
rectangles	<i>Prime Time I Bits and Pieces I I Shapes and Designs R Bits and Pieces II I Covering and Surrounding IM Bits and Pieces III R</i>	<i>Variables and Patterns R Stretching and Shrinking R Comparing and Scaling R Moving Straight Ahead R Filling and Wrapping R What Do You Expect? R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>
triangles	<i>Covering and Surrounding IM Bits and Pieces III R</i>	<i>Variables and Patterns R Stretching and Shrinking R Moving Straight Ahead R Filling and Wrapping R</i>	<i>Looking for Pythagoras R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R</i>
parallelograms	<i>Covering and Surrounding IM Bits and Pieces III R</i>	<i>Variables and Patterns R Stretching and Shrinking R Filling and Wrapping R</i>	<i>Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R</i>
circles	<i>Covering and Surrounding IM Bits and Pieces III R</i>	<i>Variables and Patterns R Stretching and Shrinking R Moving Straight Ahead R Filling and Wrapping R</i>	<i>Looking for Pythagoras R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>
irregular polygons	<i>Bits and Pieces I I Bits and Pieces II I Covering and Surrounding IM Bits and Pieces III R</i>	<i>Stretching and Shrinking R Filling and Wrapping R</i>	<i>Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>

<b>Measurement (cont.)</b>			
	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
trapezoids	<i>Covering and Surrounding I</i>		<i>Frogs, Fleas, and Painted Cubes IM</i> <i>Say It with Symbols R</i>
constant area, changing perimeter	<i>Covering and Surrounding IM</i>	<i>Variables and Patterns R</i>	<i>Thinking With Mathematical Models R</i> <i>Frogs, Fleas, and Painted Cubes R</i>
relationships of areas of similar figures		<i>Stretching and Shrinking IM</i> <i>Comparing and Scaling R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i>	<i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
<b>Volume</b>			
models		<i>Filling and Wrapping IM</i> <i>What Do You Expect? R</i>	<i>Frogs, Fleas, and Painted Cubes R</i>
cubes		<i>Filling and Wrapping IM</i> <i>What Do You Expect? R</i>	<i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i>
prisms		<i>Filling and Wrapping IM</i> <i>What Do You Expect? R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i>
cylinders		<i>Filling and Wrapping IM</i>	<i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
cones		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Say It with Symbols R</i>
pyramids		<i>Filling and Wrapping IM</i>	<i>Looking for Pythagoras R</i> <i>Say It with Symbols R</i>
spheres		<i>Filling and Wrapping IM</i>	<i>Say It with Symbols R</i>
irregular figures		<i>Filling and Wrapping IM</i>	<i>Say It with Symbols R</i>

### Measurement (cont.)

	Grade 6	Grade 7	Grade 8
similar figures and scale factors		<i>Filling and Wrapping IM</i>	
effects when the dimensions of a solid are changed proportionally		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R</i>
<b>Surface Area</b>			
flat patterns (nets) for solid figures	<i>Covering and Surrounding R How Likely Is It? R</i>	<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>
other models		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R</i>
cubes		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Frogs, Fleas, and Painted Cubes R Say It with Symbols R</i>
prisms		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
cylinders		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
pyramids	<i>How Likely Is It? I</i>	<i>Filling and Wrapping I</i>	<i>Looking for Pythagoras I</i>
irregular figures			<i>Say It with Symbols I</i>
formulas		<i>Filling and Wrapping IM</i>	

<b>Measurement (cont.)</b>			
	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<b>Finding Missing Lengths</b>			
similar figures using ratios or scale factor		<i>Stretching and Shrinking IM Comparing and Scaling R Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R</i>
on a coordinate grid			<i>Looking for Pythagoras IM The Shapes of Algebra R</i>
using the Pythagorean Theorem			<i>Looking for Pythagoras IM Growing, Growing, Growing R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>
<b>Indirect</b>			
similar triangles		<i>Stretching and Shrinking IM Comparing and Scaling R</i>	<i>Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R</i>
solving problems with		<i>Stretching and Shrinking IM Comparing and Scaling R</i>	<i>Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R</i>
<b>Units of Measure</b>			
converting within the same measurement system	<i>Shapes and Designs R</i>	<i>Moving Straight Ahead R Filling and Wrapping R</i>	
converting among customary and metric		<i>Comparing and Scaling R Moving Straight Ahead R Data About Us R</i>	
<b>Geometry</b>			
<b>Line</b>			
parallel lines	<i>Shapes and Designs IM</i>	<i>Stretching and Shrinking R Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R The Shapes of Algebra R</i>
perpendicular lines	<i>Shapes and Designs IM</i>	<i>Moving Straight Ahead R</i>	<i>Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R The Shapes of Algebra R</i>
transversals	<i>Shapes and Designs IM</i>	<i>Stretching and Shrinking R</i>	<i>Kaleidoscopes, Hubcaps, and Mirrors R</i>
midpoints	<i>Shapes and Designs IM</i>	<i>Stretching and Shrinking R</i>	<i>Looking for Pythagoras R The Shapes of Algebra R</i>

Geometry (cont.)			
	Grade 6	Grade 7	Grade 8
<b>Angles</b>			
classifying	<i>Shapes and Designs</i> IM		
congruent	<i>Shapes and Designs</i> IM	<i>Stretching and Shrinking</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
complementary and supplementary		<i>Stretching and Shrinking</i> IM <i>Filling and Wrapping</i> R	
of a polygon	<i>Shapes and Designs</i> IM	<i>Variables and Patterns</i> R <i>Stretching and Shrinking</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
n-gon angle sum	<i>Shapes and Designs</i> IM <i>Bits and Pieces III</i> R	<i>Variables and Patterns</i> R <i>Moving Straight Ahead</i> R	<i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>The Shapes of Algebra</i> R
on a circular grid	<i>Shapes and Designs</i> IM		
corresponding (parallel lines)	<i>Shapes and Designs</i> IM	<i>Stretching and Shrinking</i> R	<i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
<b>Polygons</b>			
properties of	<i>Shapes and Designs</i> IM		<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>The Shapes of Algebra</i> R
regular	<i>Shapes and Designs</i> IM	<i>Variables and Patterns</i> R <i>Moving Straight Ahead</i> R	
tilings/tessellations	<i>Shapes and Designs</i> IM	<i>Stretching and Shrinking</i> R	<i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
diagonals	<i>Shapes and Designs</i> IM	<i>Variables and Patterns</i> R <i>Moving Straight Ahead</i> R	<i>Looking for Pythagoras</i> R <i>Growing, Growing, Growing</i> R <i>Frogs, Fleas, and Painted Cubes</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
triangles, classifying	<i>Shapes and Designs</i> IM	<i>Stretching and Shrinking</i> R <i>Moving Straight Ahead</i> R <i>Filling and Wrapping</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R
quadrilaterals, classifying	<i>Shapes and Designs</i> IM	<i>Stretching and Shrinking</i> R <i>Moving Straight Ahead</i> R	<i>Looking for Pythagoras</i> R <i>Kaleidoscopes, Hubcaps, and Mirrors</i> R <i>The Shapes of Algebra</i> R

## Geometry (cont.)

	Grade 6	Grade 7	Grade 8
similar		<i>Stretching and Shrinking IM</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i>	<i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
congruent	<i>Covering and Surrounding I</i> <i>How Likely Is It? I</i>	<i>Stretching and Shrinking I</i>	<i>Looking for Pythagoras I</i> <i>Kaleidoscopes, Hubcaps, and Mirrors IM</i>
enlarging and shrinking (dilations)		<i>Stretching and Shrinking IM</i> <i>Moving Straight Ahead R</i>	<i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
drawing on coordinate grid		<i>Stretching and Shrinking IM</i> <i>Moving Straight Ahead R</i>	<i>Looking for Pythagoras R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
Pythagorean Theorem			<i>Looking for Pythagoras IM</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
<b>Circles</b>			
Relationship between radius/diameter/ circumference	<i>Covering and Surrounding IM</i>	<i>Filling and Wrapping R</i>	<i>Looking for Pythagoras R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
<b>Three-Dimensional Figures</b>			
cubes		<i>Filling and Wrapping IM</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Frogs, Fleas, and Painted Cubes R</i>
prisms		<i>Filling and Wrapping IM</i>	<i>Looking for Pythagoras R</i>
cylinders/spheres/cones		<i>Filling and Wrapping IM</i>	<i>Looking for Pythagoras R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i>
pyramids		<i>Filling and Wrapping IM</i>	<i>Looking for Pythagoras R</i>
base plans/top, side, and front views	See also <i>Ruins of Montarek</i> ©2004 IM	<i>Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R</i> <i>Frogs, Fleas, and Painted Cubes R</i>

## Geometry (cont.)

	Grade 6	Grade 7	Grade 8
spatial visualization	<i>Shapes and Designs I</i> <i>Covering and Surrounding I</i> <i>How Likely Is It? I</i> See also <i>Ruins of Montarek</i> ©2004 IM	<i>Stretching and Shrinking R</i> <i>Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
<b>Transformations</b>			
reflections	<i>Shapes and Designs I</i>	<i>Accentuate the Negative I</i>	<i>Frogs, Fleas, and Painted Cubes I</i> <i>Kaleidoscopes, Hubcaps, and Mirrors IM</i> <i>The Shapes of Algebra R</i>
rotations	<i>Shapes and Designs I</i>		<i>Kaleidoscopes, Hubcaps, and Mirrors IM</i>
translations		<i>Stretching and Shrinking I</i> <i>Accentuate the Negative I</i>	<i>Frogs, Fleas, and Painted Cubes I</i> <i>Kaleidoscopes, Hubcaps, and Mirrors IM</i> <i>The Shapes of Algebra R</i>
combinations of transformations		<i>Stretching and Shrinking I</i>	<i>Kaleidoscopes, Hubcaps, and Mirrors IM</i>
symmetry	<i>Shapes and Designs IM</i>		<i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>The Shapes of Algebra R</i>
constructing symmetric figures			<i>Kaleidoscopes, Hubcaps, and Mirrors IM</i> <i>The Shapes of Algebra R</i>
dilations		<i>Stretching and Shrinking IM</i> <i>Accentuate the Negative R</i>	<i>Kaleidoscopes, Hubcaps, and Mirrors IM</i> <i>The Shapes of Algebra R</i>
algebraic rules/properties for		<i>Stretching and Shrinking I</i>	<i>Kaleidoscopes, Hubcaps, and Mirrors IM</i>
on a coordinate plane	<i>Shapes and Designs I</i>	<i>Stretching and Shrinking I</i> <i>Accentuate the Negative I</i>	<i>Looking for Pythagoras I</i> <i>Kaleidoscopes, Hubcaps, and Mirrors IM</i> <i>The Shapes of Algebra R</i>

## Algebra

	Grade 6	Grade 7	Grade 8
<b>Patterns</b> Patterns appear in all 24 units.			
numerical	<i>Prime Time I</i> <i>Bits and Pieces I I</i> <i>Shapes and Designs I</i> <i>Bits and Pieces II R</i> <i>Covering and Surrounding I</i> <i>Bits and Pieces III I</i> <i>Data About Us I</i>	<i>Variables and Patterns IM</i> <i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>Accentuate the Negative R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
geometric	<i>Covering and Surrounding IM</i>	<i>Variables and Patterns R</i> <i>Accentuate the Negative R</i> <i>Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i>
rates of change		<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Accentuate the Negative I</i> <i>Moving Straight Ahead IM</i> <i>Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
rules	<i>Prime Time I</i> <i>Bits and Pieces I I</i> <i>Shapes and Designs I</i> <i>Covering and Surrounding I</i>	<i>Variables and Patterns IM</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>
analyzing and making predictions from	<i>Covering and Surrounding I</i>  <i>Data About Us I</i>	<i>Variables and Patterns IM</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
functions	<i>Covering and Surrounding I</i>	<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R Samples and Populations R</i>
<b>Variables/Expressions</b>			
dependent, independent		<i>Variables and Patterns I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i>
coefficients		<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
like, constant, linear terms		<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
evaluating		<i>Variables and Patterns I Moving Straight Ahead IM</i>	
equivalent		<i>Variables and Patterns I Moving Straight Ahead I</i>	<i>Growing, Growing, Growing I Frogs, Fleas, and Painted Cubes I Say It with Symbols IM The Shapes of Algebra R</i>
factored form/ expanded form		<i>Accentuate the Negative I Moving Straight Ahead IM</i>	<i>Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
<b>Relationships</b>			
continuous/ discrete		<i>Variables and Patterns I Accentuate the Negative I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R</i>

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
linear	<i>Data About Us I</i>	<i>Variables and Patterns I Comparing and Scaling I Accentuate the Negative I Moving Straight Ahead IM Filling and Wrapping R Data Distributions R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R Samples and Populations R</i>
nonlinear	<i>Covering and Surrounding I Data About Us I</i>	<i>Variables and Patterns I Moving Straight Ahead I Filling and Wrapping I Data Distributions I</i>	<i>Thinking With Mathematical Models IM Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
inverse		<i>Variables and Patterns I Moving Straight Ahead I</i>	<i>Thinking With Mathematical Models IM Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
exponential growth/ exponential decay			<i>Growing, Growing, Growing IM Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
quadratic	<i>Covering and Surrounding I</i>	<i>Filling and Wrapping I</i>	<i>Frogs, Fleas, and Painted Cubes IM Say It with Symbols R The Shapes of Algebra R</i>
slope		<i>Variables and Patterns I Moving Straight Ahead I</i>	<i>Thinking With Mathematical Models IM Looking for Pythagoras R Growing, Growing, Growing R The Shapes of Algebra R</i>
slopes of perpendicular lines/parallel lines		<i>Moving Straight Ahead IM</i>	<i>Looking for Pythagoras R The Shapes of Algebra R</i>
<b>Equations, Linear</b>			
tables for		<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
graphs for		<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Accentuate the Negative I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
fitting to a graph	<i>Data About Us I</i>	<i>Moving Straight Ahead IM</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
Slope-intercept form $y = mx + b$		<i>Variables and Patterns I</i> <i>Moving Straight Ahead I</i> <i>Data Distributions I</i>	<i>Thinking With Mathematical Models IM</i> <i>Growing, Growing, Growing R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
Standard form $ax + by = c$			<i>The Shapes of Algebra IM</i>
writing		<i>Variables and Patterns IM</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
solving with tables		<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
solving by graphing		<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
solving symbolically	<i>Bits and Pieces II I</i> <i>Bits and Pieces III I</i>	<i>Variables and Patterns I</i> <i>Accentuate the Negative I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
solving with graphing calculator		<i>Variables and Patterns I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
solving systems of		<i>Variables and Patterns I</i> <i>Moving Straight Ahead I</i>	<i>Thinking With Mathematical Models I</i> <i>Frogs, Fleas, and Painted Cubes I</i> <i>Say It with Symbols I</i> <i>The Shapes of Algebra IM</i>
formulate given a problem situation (and vice versa)		<i>Variables and Patterns I</i> <i>Comparing and Scaling I</i> <i>Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
<b>Equations, Quadratic</b>			
writing			<i>Frogs, Fleas, and Painted Cubes IM</i> <i>Say It with Symbols R</i>
graphs for	<i>Covering and Surrounding I</i>		<i>Frogs, Fleas, and Painted Cubes IM</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>
solving			<i>Frogs, Fleas, and Painted Cubes I</i> <i>Say It with Symbols IM</i> <i>The Shapes of Algebra R</i>
finding roots			<i>Frogs, Fleas, and Painted Cubes I</i> <i>Say It with Symbols IM</i> <i>The Shapes of Algebra R</i>
inequalities			<i>The Shapes of Algebra I</i>

<b>Algebra (cont.)</b>			
	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
<b>Equations, Nonlinear</b>			
models		<i>Variables and Patterns I Moving Straight Ahead I</i>	<i>Thinking With Mathematical Models IM Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R</i>
cubic			<i>Thinking With Mathematical Models I Frogs, Fleas, and Painted Cubes I Say It with Symbols I</i>
exponential			<i>Thinking With Mathematical Models I Growing, Growing, Growing IM Say It with Symbols R The Shapes of Algebra R</i>
inverse			<i>Thinking With Mathematical Models IM Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
of circles			<i>The Shapes of Algebra IM</i>
<b>Graphing</b>			
explore shapes of graphs	<i>Covering and Surrounding I Data About Us I</i>	<i>Variables and Patterns IM Comparing and Scaling R Moving Straight Ahead R see also Data Around Us ©2004</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R Samples and Populations R</i>
ordered pairs	<i>Data About Us I</i>	<i>Variables and Patterns IM Stretching and Shrinking R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Growing, Growing, Growing R Kaleidoscopes, Hubcaps, and Mirrors R The Shapes of Algebra R Samples and Populations R</i>
polar coordinates	<i>Shapes and Designs IM</i>		

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
equations		<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM Data Distributions R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R Samples and Populations R</i>
inequalities		<i>Variables and Patterns I Moving Straight Ahead I</i>	<i>Thinking With Mathematical Models I Say It with Symbols I The Shapes of Algebra IM</i>
systems of linear inequalities			<i>The Shapes of Algebra IM</i>
using a table	<i>Covering and Surrounding I Data About Us I</i>	<i>Variables and Patterns IM Comparing and Scaling R Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R</i>
with a graphing calculator		<i>Variables and Patterns IM Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R</i>
slope		<i>Variables and Patterns I Comparing and Scaling I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Say It with Symbols R The Shapes of Algebra R Samples and Populations R</i>
x-intercept		<i>Variables and Patterns I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R Samples and Populations R</i>
y-intercept		<i>Variables and Patterns I Moving Straight Ahead IM</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>

## Algebra (cont.)

	Grade 6	Grade 7	Grade 8
maximum and minimum	<i>Covering and Surrounding I</i>	<i>Filling and Wrapping I</i>	<i>Frogs, Fleas, and Painted Cubes IM</i> <i>Say It with Symbols R</i>
systems of equations		<i>Variables and Patterns IM</i> <i>Moving Straight Ahead R</i>	<i>Thinking With Mathematical Models R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i>

## Problem Solving Skills

**Problem Solving Strategies** As a problem solving curriculum, every unit helps students develop a variety of strategies for solving problems such as; building models, making lists and tables, drawing diagrams, and solving simpler problems.

drawing a diagram	<i>Bits and Pieces I R</i> <i>Shapes and Designs R</i> <i>Bits and Pieces II R</i> <i>Covering and Surrounding R</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i>	<i>Stretching and Shrinking R</i> <i>Accentuate the Negative R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i>
looking for a pattern	<i>Prime Time R</i> <i>Bits and Pieces I R</i> <i>Shapes and Designs R</i> <i>Bits and Pieces II R</i> <i>Covering and Surrounding R</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>Variables and Patterns R</i> <i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Kaleidoscopes, Hubcaps, and Mirrors R</i> <i>Say It with Symbols R</i>
making a graph	<i>Covering and Surrounding R</i> <i>Data About Us R</i>	<i>Variables and Patterns R</i> <i>Stretching and Shrinking R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>The Shapes of Algebra R</i> <i>Samples and Populations R</i>
making a table	<i>Prime Time R</i> <i>Shapes and Designs R</i> <i>Covering and Surrounding R</i> <i>Bits and Pieces III R</i> <i>How Likely Is It? R</i> <i>Data About Us R</i>	<i>Variables and Patterns R</i> <i>Comparing and Scaling R</i> <i>Moving Straight Ahead R</i> <i>Filling and Wrapping R</i> <i>What Do You Expect? R</i> <i>Data Distributions R</i>	<i>Thinking With Mathematical Models R</i> <i>Looking for Pythagoras R</i> <i>Growing, Growing, Growing R</i> <i>Frogs, Fleas, and Painted Cubes R</i> <i>Say It with Symbols R</i> <i>Samples and Populations R</i>

### Problem Solving Skills (cont.)

	<b>Grade 6</b>	<b>Grade 7</b>	<b>Grade 8</b>
simulating a problem	<i>Prime Time IM Covering and Surrounding R How Likely Is It? R</i>	<i>Variables and Patterns R Moving Straight Ahead R Filling and Wrapping R What Do You Expect? R Data Distributions R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Samples and Populations R</i>
try, check, revise	<i>Prime Time IM Bits and Pieces I R Shapes and Designs R Bits and Pieces II R Covering and Surrounding R Bits and Pieces III R How Likely Is It? R Data About Us R</i>	<i>Stretching and Shrinking R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R The Shapes of Algebra R</i>
write an equation	<i>Shapes and Designs R Covering and Surrounding R</i>	<i>Variables and Patterns R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R Filling and Wrapping R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R Say It with Symbols R The Shapes of Algebra R</i>
<b>Reasonableness</b>			
justify answers	<i>Prime Time IM Bits and Pieces I R Bits and Pieces II R Bits and Pieces III R How Likely Is It? R Data About Us R</i>	<i>Variables and Patterns R Stretching and Shrinking R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R Filling and Wrapping R What Do You Expect? R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Kaleidoscopes, Hubcaps, and Mirrors R Say It with Symbols R Samples and Populations R</i>
make and test conjectures	<i>Prime Time IM Bits and Pieces I R Shapes and Designs R Bits and Pieces II R Bits and Pieces III R How Likely Is It? R Data About Us R</i>	<i>Stretching and Shrinking R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R Filling and Wrapping R What Do You Expect? R Data Distributions R</i>	<i>Thinking With Mathematical Models R Looking for Pythagoras R Kaleidoscopes, Hubcaps, and Mirrors R The Shapes of Algebra R Samples and Populations R</i>
reason from graphs	<i>Covering and Surrounding R Data About Us R</i>	<i>Variables and Patterns R Stretching and Shrinking R Comparing and Scaling R Accentuate the Negative R Moving Straight Ahead R Data Distributions R</i>	<i>Thinking With Mathematical Models R Growing, Growing, Growing R Frogs, Fleas, and Painted Cubes R The Shapes of Algebra R Samples and Populations R</i>
validate conclusions using mathematical properties	All units	All units	All units

**Communication** Student explanations are requested throughout in Problems, in the ACE, and in teacher questioning from the teacher's guides.