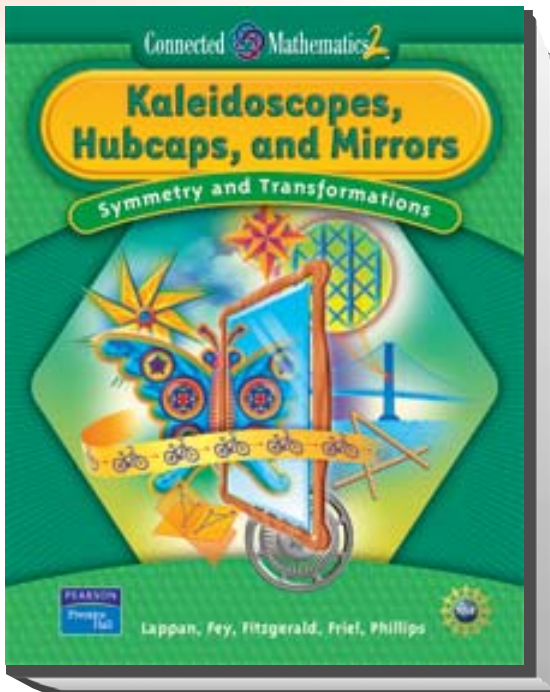


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Problem Solving	
<ul style="list-style-type: none"> • Build new mathematical knowledge through problem solving. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 5-6 Thinking With Mathematical Models 24-26, 47-48 The Shapes of Algebra 24-25, 37-38 Growing, Growing, Growing 48-49 Frogs, Fleas, and Painted Cubes 40-41 Looking for Pythagoras 19 Samples and Populations 12-15 Kaleidoscopes, Hubcaps, and Mirrors 66-67</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 20-24 Thinking With Mathematical Models 38-42, 62-66 The Shapes of Algebra 38-42, 56-60 Growing, Growing, Growing 81-84 Frogs, Fleas, and Painted Cubes 89-94 Looking for Pythagoras 35-38 Samples and Populations 31-36 Kaleidoscopes, Hubcaps, and Mirrors 99-102</p>
<ul style="list-style-type: none"> • Solve problems that arise in mathematics and in other contexts. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 10-11, 42-43 Thinking With Mathematical Models 24-26, 48 The Shapes of Algebra 41 Growing, Growing, Growing 20-21 Frogs, Fleas, and Painted Cubes 7-8 Looking for Pythagoras 8-9 Samples and Populations 31-33 Kaleidoscopes, Hubcaps, and Mirrors 10-11</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 33-36, 81-84 Thinking With Mathematical Models 38-42, 62-66 The Shapes of Algebra 65-68 Growing, Growing, Growing 45-48 Frogs, Fleas, and Painted Cubes 25-30 Looking for Pythagoras 17-22 Samples and Populations 63-66 Kaleidoscopes, Hubcaps, and Mirrors 27-30</p>

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<ul style="list-style-type: none"> • Apply and adapt a variety of appropriate strategies to solve problems. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 8, 61-62 Thinking With Mathematical Models 25-29 The Shapes of Algebra 8, 12-13 Growing, Growing, Growing 17 Frogs, Fleas, and Painted Cubes 10 Looking for Pythagoras 27-28 Samples and Populations 63-65 Kaleidoscopes, Hubcaps, and Mirrors 54-55</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 32, 108-109 Thinking With Mathematical Models 38-46 The Shapes of Algebra 26, 31 Growing, Growing, Growing 42, Frogs, Fleas, and Painted Cubes 36 Looking for Pythagoras 49 Samples and Populations 96-98 Kaleidoscopes, Hubcaps, and Mirrors 87-91</p>
<ul style="list-style-type: none"> • Monitor and reflect on the process of mathematical problem solving. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 13, 56-57 Thinking With Mathematical Models 18, 43 The Shapes of Algebra 53 Growing, Growing, Growing 43 Frogs, Fleas, and Painted Cubes 22 Looking for Pythagoras 18 Samples and Populations 25 Kaleidoscopes, Hubcaps, and Mirrors 33-35</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 38, 94-96 Thinking With Mathematical Models 34, 59 The Shapes of Algebra 80 Growing, Growing, Growing 77 Frogs, Fleas, and Painted Cubes 62 Looking for Pythagoras 33 Samples and Populations 51 Kaleidoscopes, Hubcaps, and Mirrors 63-66</p>

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Reasoning and Proof	
<ul style="list-style-type: none"> • Recognize reasoning and proof as fundamental aspects of mathematics. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 37, 41 Thinking With Mathematical Models 43 The Shapes of Algebra 26, 53 Growing, Growing, Growing 65 Frogs, Fleas, and Painted Cubes 26 Looking for Pythagoras 30 Samples and Populations 46 Kaleidoscopes, Hubcaps, and Mirrors 26</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 65-68, 73-80 Thinking With Mathematical Models 59 The Shapes of Algebra 43-46, 76-80 Growing, Growing, Growing 114 Frogs, Fleas, and Painted Cubes 72-73 Looking for Pythagoras 50 Samples and Populations 74-75 Kaleidoscopes, Hubcaps, and Mirrors 42-43</p>
<ul style="list-style-type: none"> • Make and investigate mathematical conjectures. 	<p>SE: Looking for Pythagoras 32, 37</p>
	<p>TG: Looking for Pythagoras 52-56, 68</p>
<ul style="list-style-type: none"> • Develop and evaluate mathematical arguments and proofs. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 13, 56-57 Thinking With Mathematical Models 18 The Shapes of Algebra 40, 75 Growing, Growing, Growing 43 Frogs, Fleas, and Painted Cubes 22 Looking for Pythagoras 44 Samples and Populations 30-31 Kaleidoscopes, Hubcaps, and Mirrors 33</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 37-38, 94-96 Thinking With Mathematical Models 34 The Shapes of Algebra 61-64, 118 Growing, Growing, Growing 77 Frogs, Fleas, and Painted Cubes 62 Looking for Pythagoras 71 Samples and Populations 59-66 Kaleidoscopes, Hubcaps, and Mirrors 63-66</p>

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<ul style="list-style-type: none"> • Select and use various types of reasoning and methods of proof. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 13, 56-57 Thinking With Mathematical Models 43 The Shapes of Algebra 40, 75 Growing, Growing, Growing 65 Frogs, Fleas, and Painted Cubes 26 Looking for Pythagoras 30 Samples and Populations 46 Kaleidoscopes, Hubcaps, and Mirrors 26</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 37-38, 94-96 Thinking With Mathematical Models 59 The Shapes of Algebra 61-64, 118 Growing, Growing, Growing 114 Frogs, Fleas, and Painted Cubes 72-73 Looking for Pythagoras 50 Samples and Populations 74-75 Kaleidoscopes, Hubcaps, and Mirrors 42-43</p>
Communication	
<ul style="list-style-type: none"> • Organize and consolidate their mathematical thinking through communication. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 22, 36 Thinking With Mathematical Models 23, 46 The Shapes of Algebra 68 Growing, Growing, Growing 32 Frogs, Fleas, and Painted Cubes 18 Looking for Pythagoras 30 Samples and Populations 46 Kaleidoscopes, Hubcaps, and Mirrors 47</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 43, 63 Thinking With Mathematical Models 36, 60 The Shapes of Algebra 98-99 Growing, Growing, Growing 60 Frogs, Fleas, and Painted Cubes 45 Looking for Pythagoras 50 Samples and Populations 74-75 Kaleidoscopes, Hubcaps, and Mirrors 73</p>

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<ul style="list-style-type: none"> Communicate their mathematical thinking coherently and clearly to peers, teachers, and others. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 55 Thinking With Mathematical Models 46, 61 The Shapes of Algebra 23 Growing, Growing, Growing 32, 58 Frogs, Fleas, and Painted Cubes 18 Looking for Pythagoras 30 Samples and Populations 25 Kaleidoscopes, Hubcaps, and Mirrors 26</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 92 Thinking With Mathematical Models 60, 80 The Shapes of Algebra 36 Growing, Growing, Growing 60, 97 Frogs, Fleas, and Painted Cubes 45 Looking for Pythagoras 50 Samples and Populations 51 Kaleidoscopes, Hubcaps, and Mirrors 42-43</p>
<ul style="list-style-type: none"> Analyze and evaluate the mathematical thinking and strategies of others. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 20, 7 Thinking With Mathematical Models 31 The Shapes of Algebra 43 Growing, Growing, Growing 46 Frogs, Fleas, and Painted Cubes 26 Looking for Pythagoras 64 Samples and Populations 51-52 Kaleidoscopes, Hubcaps, and Mirrors 22</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 42, 25-28 Thinking With Mathematical Models 47-50 The Shapes of Algebra 70 Growing, Growing, Growing 78 Frogs, Fleas, and Painted Cubes 69-73 Looking for Pythagoras 96 Samples and Populations 83-89 Kaleidoscopes, Hubcaps, and Mirrors 40</p>

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<ul style="list-style-type: none"> • Use the language of mathematics to express mathematical ideas precisely. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 5-6 Thinking With Mathematical Models 49 The Shapes of Algebra 26 Growing, Growing, Growing 8, 37 Frogs, Fleas, and Painted Cubes 22-23 Looking for Pythagoras 20 Samples and Populations 12 Kaleidoscopes, Hubcaps, and Mirrors 13</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 15, 23 Thinking With Mathematical Models 69 The Shapes of Algebra 13 Growing, Growing, Growing 13, 69 Frogs, Fleas, and Painted Cubes 67 Looking for Pythagoras 41 Samples and Populations 35 Kaleidoscopes, Hubcaps, and Mirrors 33</p>
Connections	
<ul style="list-style-type: none"> • Recognize and use connections among mathematical ideas. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 16-20 Thinking With Mathematical Models 40-43 The Shapes of Algebra 32-34, 46-48 Growing, Growing, Growing 16, 17, 42-44 Frogs, Fleas, and Painted Cubes 16-17 Looking for Pythagoras 57-59 Samples and Populations 22-24 Kaleidoscopes, Hubcaps, and Mirrors 91-92</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 13, 40-42 Thinking With Mathematical Models 7, 58-59 The Shapes of Algebra 11 Growing, Growing, Growing 11 Frogs, Fleas, and Painted Cubes 11 Looking for Pythagoras 10 Samples and Populations 12 Kaleidoscopes, Hubcaps, and Mirrors 11</p>

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<ul style="list-style-type: none"> • Understand how mathematical ideas interconnect and build on one another to produce a coherent whole. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 31-34, 49-52 Thinking With Mathematical Models 16-20 The Shapes of Algebra 16-19, 46-48 Growing, Growing, Growing 42-44 Frogs, Fleas, and Painted Cubes 16-17 Looking for Pythagoras 26-28 Samples and Populations 56-59 Kaleidoscopes, Hubcaps, and Mirrors 19-23</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 59-62, 89-90 Thinking With Mathematical Models 33-35 The Shapes of Algebra 33-34, 72-73 Growing, Growing, Growing 77-79 Frogs, Fleas, and Painted Cubes 43-44 Looking for Pythagoras 48-49 Samples and Populations 92-93 Kaleidoscopes, Hubcaps, and Mirrors 38-41</p>
<ul style="list-style-type: none"> • Recognize and apply mathematics in contexts outside of mathematics. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 57 Thinking With Mathematical Models 2, 12 The Shapes of Algebra 49, 52-53 Growing, Growing, Growing 22, 33-36 Frogs, Fleas, and Painted Cubes 7-8 Looking for Pythagoras 49-50 Samples and Populations 5-9 Kaleidoscopes, Hubcaps, and Mirrors 10-11</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 94-96 Thinking With Mathematical Models 31 The Shapes of Algebra 73, 76-80 Growing, Growing, Growing 49-52, 62-70 Frogs, Fleas, and Painted Cubes 25-30 Looking for Pythagoras 79-82 Samples and Populations 20-24 Kaleidoscopes, Hubcaps, and Mirrors 27-30</p>

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<p>Representation</p>	
<ul style="list-style-type: none"> • Create and use representations to organize, record, and communicate mathematical ideas. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 40-41 Thinking With Mathematical Models 32, 48 The Shapes of Algebra 8-9 Growing, Growing, Growing 35 Frogs, Fleas, and Painted Cubes 19-20, 45 Looking for Pythagoras 20-21 Samples and Populations 66-68 Kaleidoscopes, Hubcaps, and Mirrors 8-9</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 73-80 Thinking With Mathematical Models 51-54, 62-66 The Shapes of Algebra 23-26 Growing, Growing, Growing 67-70 Frogs, Fleas, and Painted Cubes 48-54 Looking for Pythagoras 39-42 Samples and Populations 103-106 Kaleidoscopes, Hubcaps, and Mirrors 23-26</p>
<ul style="list-style-type: none"> • Select, apply, and translate among mathematical representations to solve problems. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 7 Thinking With Mathematical Models 24-25 The Shapes of Algebra 10-11, 28 Growing, Growing, Growing 23, 34 Frogs, Fleas, and Painted Cubes 24-25 Looking for Pythagoras 31-32 Samples and Populations 7-9 Kaleidoscopes, Hubcaps, and Mirrors 12-14</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 25-28 Thinking With Mathematical Models 38-42 The Shapes of Algebra 23-30, 47-50 Growing, Growing, Growing 49-52, 62-66 Frogs, Fleas, and Painted Cubes 69-74 Looking for Pythagoras 52-56 Samples and Populations 20-24 Kaleidoscopes, Hubcaps, and Mirrors 31-34</p>

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<ul style="list-style-type: none"> • Use representations to model and interpret physical, social, and mathematical phenomena. 	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 62 Thinking With Mathematical Models 10-11, 27-28 The Shapes of Algebra 38 Growing, Growing, Growing 35 Frogs, Fleas, and Painted Cubes 56, 76 Looking for Pythagoras 10 Samples and Populations 5-15 Kaleidoscopes, Hubcaps, and Mirrors 50</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 108 Thinking With Mathematical Models 25-30, 43-46 The Shapes of Algebra 56-60 Growing, Growing, Growing 67-70 Frogs, Fleas, and Painted Cubes 117-120, 154-155 Looking for Pythagoras 23-26 Samples and Populations 20-37 Kaleidoscopes, Hubcaps, and Mirrors 79-82</p>
Estimation and Mental Computation	
<ul style="list-style-type: none"> • Know and apply appropriate methods for estimating the results of computations. 	<p>SE: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84</p>
	<p>TG: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112</p>
<ul style="list-style-type: none"> • Round numbers to a specified place value. 	<p>SE: Can be developed from: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84</p>
	<p>TG: Can be developed from: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112</p>
<ul style="list-style-type: none"> • Use estimation to decide whether answers are reasonable. 	<p>SE: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84</p>

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	TG: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112
• Decide when estimation is an appropriate strategy for solving a problem.	SE: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84
	TG: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112
• Determine appropriate accuracy and precision of measurement in problem situations.	SE: Can be developed from: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84
	TG: Can be developed from: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112
• Use properties of numbers and operations to perform mental computation.	SE: Say It With Symbols 9-11, 15, 22, 38, 89
	TG: Say It With Symbols 33-36, 39, 43, 65-68
• Recognize when the numbers involved in a computation allow for a mental computation strategy.	SE: Can be developed from: The Shapes of Algebra 25, 31, 34, 42-43, 49, 83-84 Samples and Populations 21, 23-24, 29, 34, 66, 68, 71, 80, 81-82, 84
	TG: Can be developed from: The Shapes of Algebra 42, 52-53, 69-70, 73, 122-123 Samples and Populations 49-51, 106, 108-109, 111-112
Technology	
• Technology should be used as a tool in mathematics education to support and extend the mathematics curriculum.	SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 7, 13 Thinking With Mathematical Models 55, 57 The Shapes of Algebra 31 Growing, Growing, Growing 12 Frogs, Fleas, and Painted Cubes 45 Looking for Pythagoras 13 Samples and Populations 37 Kaleidoscopes, Hubcaps, and Mirrors 15

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	<p>TG: Addressed throughout the program. Sample citations follow:</p> <p>Say It With Symbols 16 Thinking With Mathematical Models 10 The Shapes of Algebra 14 Growing, Growing, Growing 14-16 Frogs, Fleas, and Painted Cubes 14-16 Looking for Pythagoras 13 Samples and Populations 16 Kaleidoscopes, Hubcaps, and Mirrors 15</p>
<ul style="list-style-type: none"> • Technology can contribute to concept development, simulation, representation, communication, and problem solving. 	<p>SE: Addressed throughout the program. Sample citations follow:</p> <p>Say It With Symbols 67, 77 Thinking With Mathematical Models 14, 34 The Shapes of Algebra 13 Growing, Growing, Growing 27 Frogs, Fleas, and Painted Cubes 6 Looking for Pythagoras 57 Samples and Populations 42 Kaleidoscopes, Hubcaps, and Mirrors 29</p>
	<p>TG: Addressed throughout the program. Sample citations follow:</p> <p>Say It With Symbols 16 Thinking With Mathematical Models 10 The Shapes of Algebra 14 Growing, Growing, Growing 14-16 Frogs, Fleas, and Painted Cubes 14-16 Looking for Pythagoras 13 Samples and Populations 16 Kaleidoscopes, Hubcaps, and Mirrors 15</p>
<ul style="list-style-type: none"> • The challenge is to ensure that technology supports-but is not a substitute for- the development of skills with basic operations, quantitative reasoning, and problemsolving skills. 	<p>SE: Addressed throughout the program. Sample citations follow:</p> <p>Say It With Symbols 46, 61 Thinking With Mathematical Models 14, 55 The Shapes of Algebra 42 Growing, Growing, Growing 13 Frogs, Fleas, and Painted Cubes 16 Looking for Pythagoras 40 Samples and Populations 37 Kaleidoscopes, Hubcaps, and Mirrors 9</p>

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	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 16 Thinking With Mathematical Models 10 The Shapes of Algebra 14 Growing, Growing, Growing 14-16 Frogs, Fleas, and Painted Cubes 14-16 Looking for Pythagoras 13 Samples and Populations 16 Kaleidoscopes, Hubcaps, and Mirrors 15</p>
<p>o Elementary students should learn how to perform thoroughly the basic arithmetic operations independent of the use of a calculator.</p>	<p>SE: Say It With Symbols 16-17 Thinking With Mathematical Models 40-41 The Shapes of Algebra 17, 32 Growing, Growing, Growing 12 Frogs, Fleas, and Painted Cubes 16</p>
	<p>TG: Say It With Symbols 39 Thinking With Mathematical Models 59 The Shapes of Algebra 33, 53 Growing, Growing, Growing 39 Frogs, Fleas, and Painted Cubes 44</p>
<p>o The focus must be on learning mathematics, using technology as a tool rather than as an end in itself.</p>	<p>SE: Addressed throughout the program. Sample citations follow: Say It With Symbols 16, 31 Thinking With Mathematical Models 19 The Shapes of Algebra 16, 42 Growing, Growing, Growing 54 Frogs, Fleas, and Painted Cubes 32 Looking for Pythagoras 25 Samples and Populations 42 Kaleidoscopes, Hubcaps, and Mirrors 37</p>
	<p>TG: Addressed throughout the program. Sample citations follow: Say It With Symbols 16 Thinking With Mathematical Models 10 The Shapes of Algebra 14 Growing, Growing, Growing 14-16 Frogs, Fleas, and Painted Cubes 14-16 Looking for Pythagoras 13 Samples and Populations 16 Kaleidoscopes, Hubcaps, and Mirrors 15</p>

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8.1 Standard 1 Number Sense and Computation	
8.1.1 Interpret calculator or computer displays of numbers given in scientific notation and read, write, compare and solve problems using decimals in scientific notation.	SE: Growing, Growing, Growing 17, 28, 55, 70-72, 81
	TG: Growing, Growing, Growing 42, 58, 95, 115-116
8.1.2 Recognize positive integer powers as repeated multiplication and negative integer powers as repeated division or multiplication by the multiplicative inverse.	SE: Growing, Growing, Growing 5-10, 11-19, 28-29 Frogs, Fleas, and Painted Cubes 44-45
	TG: Growing, Growing, Growing 20-38, 39-43, 58-59 Frogs, Fleas, and Painted Cubes 107
8.1.3 Use the laws of exponents for integer exponents and evaluate expressions with negative integer exponents.	SE: Growing, Growing, Growing 5-10, 11-19, 28-29 Frogs, Fleas, and Painted Cubes 44-45
	TG: Growing, Growing, Growing 20-38, 39-43, 58-59 Frogs, Fleas, and Painted Cubes 107
8.1.4 Identify, compare and order irrational numbers.	SE: The Shapes of Algebra 28-29, 31, 34-35, 46
	TG: The Shapes of Algebra 47-50, 52-54, 72
8.1.5 Calculate square roots of perfect squares, estimate square roots of numbers less than 1,000, and use the inverse relationship between squares and square roots.	SE: Growing, Growing, Growing 5-7 Frogs, Fleas, and Painted Cubes 44-45 Looking for Pythagoras 20-22, 24-29, 30
	TG: Growing, Growing, Growing 10, 20-30 Frogs, Fleas, and Painted Cubes 107-108 Looking for Pythagoras 39-46, 47-50
8.1.6 Solve percent, ratio and proportion problems. <ul style="list-style-type: none"> • Find average rates. • Express one quantity as a percentage of another. • Compare two quantities by percentage. • Use percentages greater than 100%. • Increase or decrease a quantity by a given percentage. • Find the original amount for a given percentage increase or decrease. • Solve problems involving percents, ratios and proportions. • Solve problems involving simple and compound interest. 	SE: Growing, Growing, Growing 35-37, 47 Looking for Pythagoras 48, 56
	TG: Growing, Growing, Growing 67-74, 79 Looking for Pythagoras 92

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8.2 Standard 2 Algebra and Functions	
8.2.1 Write and solve linear equations and inequalities, interpret the solution or solutions in their context, and verify the reasonableness of the results.	SE: Say It With Symbols 25, 28-30, 37-39, 48-50, 52-55, 58-59, 61-66, 68, 71, 86-88 Thinking With Mathematical Models 18-19, 24-32, 33-35, 46, 62-64, 65 The Shapes of Algebra 24-29, 30-36, 37-41, 42-51, 52-58, 59-68, 69-77, 78-82
	TG: Say It With Symbols 52, 57-58, 65-72, 87-89, 90-91, 97-106, 108-112, 114 Thinking With Mathematical Models 34-35, 38-54, 55-56, 60, 80-81 The Shapes of Algebra 38-50, 51-54, 56-68, 69-74, 76-94, 95-99, 101-116, 117-122
8.2.2 Solve equations and formulas for a specified variable.	SE: Say It With Symbols 25, 28-30, 37-39, 48-50, 52-53, 55, 58-59, 61-66, 68, 71, 86-88 Thinking With Mathematical Models 18-19, 24-32, 33-35, 46, 62-64, 65 The Shapes of Algebra 24-29, 30-36, 37-41, 42-51, 52-58, 59-68, 69-77, 78-82 Frogs, Fleas, and Painted Cubes 25-26
	TG: Say It With Symbols 52, 57-58, 65-72, 87-89, 90-91, 97-106, 108-112, 114 Thinking With Mathematical Models 34-35, 38-54, 55-56, 60, 80-81 The Shapes of Algebra 38-50, 51-54, 56-68, 69-74, 76-94, 95-99, 101-116, 117-122 Frogs, Fleas, and Painted Cubes 69-73
8.2.3 Simplify algebraic expressions involving powers.	SE: Growing, Growing, Growing 8-10, 12-15, 17-18, 19, 20-23, 24-28, 31, 32, 33-37, 38-41, 47, 48-52, 53-56, 58, 59-63, 64, 66
	TG: Growing, Growing, Growing 31-38, 39-43, 45-52, 57-58, 60, 62-74, 75-77, 79, 81-92, 93-94, 97, 99-110, 113-114
8.2.4 Identify and graph linear functions and identify lines with positive and negative slope.	SE: Say It With Symbols 25, 28-30, 37-39, 48-50, 52-53, 55, 58-59, 61-66, 68, 71, 86-88 Thinking With Mathematical Models 18-19, 24-32, 33-35, 46, 62-64, 65 The Shapes of Algebra 24-29, 30-36, 37-41, 42-51, 52-58, 59-68, 69-77, 78-82
	TG: Say It With Symbols 52, 57-58, 65-72, 87-89, 90-91, 97-106, 108-112, 114 Thinking With Mathematical Models 34-35, 38-54, 55-56, 60, 80-81 The Shapes of Algebra 38-50, 51-54, 56-68, 69-74, 76-94, 95-99, 101-116, 117-122

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8.2.5 Find the slope of a linear function given the equation and write the equation of a line given the slope and any point on the line.	SE: The Shapes of Algebra 39-40, 45, 51, 53-58, 60, 87 Growing, Growing, Growing 16, 30
	TG: The Shapes of Algebra 61-64, 72, 74, 76-94, 95 Growing, Growing, Growing 42, 59
8.2.6 Translate among tables, equations, verbal expressions and graphs of linear functions and recognize that in $(y = mx + b)$ that m is the rate of change and b is the vertical intercept of the graph.	SE: The Shapes of Algebra 39-40, 45, 51, 53-56, 60, 87
	TG: The Shapes of Algebra 61-64, 72, 74, 76-94, 95
8.2.7 Identify functions as linear or nonlinear and contrast their characteristics from tables, graphs and equations.	SE: Thinking With Mathematical Models 11, 43-44, 47-52, 53-57, 61, 62-64
	TG: Thinking With Mathematical Models 59, 62-74, 75-78, 80-81
8.2.8 Use linear functions and linear equations to represent, analyze and solve problems.	SE: Say It With Symbols 25, 28-30, 37-39, 48-50, 52-53, 55, 58-59, 61-66, 68, 71, 86-88 Thinking With Mathematical Models 18-19, 24-32, 33-35, 46, 62-64, 65 The Shapes of Algebra 24-29, 30-36, 37-41, 42-51, 52-58, 59-68, 69-77, 78-82
	TG: Say It With Symbols 52, 57-58, 65-72, 87-89, 90-91, 97-106, 108-112, 114 Thinking With Mathematical Models 34-35, 38-54, 55-56, 60, 80-81 The Shapes of Algebra 38-50, 51-54, 56-68, 69-74, 76-94, 95-99, 101-116, 117-122
8.3 Standard 3 Geometry and Measurement	
8.3.1 Perform basic compass and straight edge constructions: angle and segment bisectors, copies of segments and angles, and perpendicular segments. Describe and justify the constructions.	SE: Can be Developed from: Kaleidoscopes, Hubcaps, and Mirrors 19-20
	TG: Can be Developed from: Kaleidoscopes, Hubcaps, and Mirrors 37-39
8.3.2 Identify, define, and describe properties of three-dimensional geometric objects, describe how two or more figures intersect in a plane or in space, and visualize or describe the cross section of a solid.	SE: Can be Developed from: Kaleidoscopes, Hubcaps, and Mirrors 21-23 Frogs, Fleas, and Painted Cubes 62-63 The Shapes of Algebra 47, 61 Thinking With Mathematical Models 19-20, 22 Say It With Symbols 19, 51, 68

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	TG: Can be Developed From: Kaleidoscopes, Hubcaps, and Mirrors 40 Frogs, Fleas, and Painted Cubes 137-143 The Shapes of Algebra 73, 96 Thinking With Mathematical Models 35-36 Say It With Symbols 41, 90, 113
8.3.3 Explain why the Pythagorean Theorem is valid using a variety of methods and use the Pythagorean Theorem and its converse to calculate lengths of line segments.	SE: Looking for Pythagoras 31-37, 38-45, 46-52, 53-64
	TG: Looking for Pythagoras 52-68, 69-72, 74-90, 91-96
8.3.4 Solve simple problems involving rates and other derived measurements, including problems involving speed, uniform speed, average speed and density, by applying the concept of proportionality to measurement in different contexts. Express measurements in a given unit or in terms of other units of the same type.	SE: Growing, Growing, Growing 33, 35-37, 40-41, 44-46, 47
	TG: Growing, Growing, Growing 62-74, 75-79
8.3.5 Use scale factors to find the area and volume of similar figures.	SE: Growing, Growing, Growing 29, 43, 68
	TG: Growing, Growing, Growing 59, 77, 115
8.3.6 Find and use the surface area and volume of cones, spheres and pyramids.	SE: Say It With Symbols 34, 85-86 Looking for Pythagoras 40-42, 63
	TG: Say It With Symbols 62, 133-138 Looking for Pythagoras 70, 96
8.3.7 Estimate and compute the area of irregular two-dimensional shapes and the volume of irregular three-dimensional objects by breaking them down into more basic geometric objects.	SE: Say It With Symbols 8-10, 12-17, 19
	TG: Say It With Symbols 29-36, 3337-41
8.3.8 Solve problems involving conversions within the same measurement system and estimate the measure of an object in one system given the measure of that object in another system and the approximate conversion factor.	SE: Can Be Developed from: Looking for Pythagoras 39-45, 47, 51-52, 53-
	TG: Can Be Developed from: Looking for Pythagoras 69-72, 91-92
8.4 Standard 4 Data Analysis and Probability	
8.4.1 Identify claims based on statistical data and, in simple cases, evaluate the reasonableness of the claims. Design a study to investigate the claim.	SE: Samples and Populations 47-53, 54-61

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	TG: Samples and Populations 77-90, 91-94
8.4.2 Identify different methods of selecting samples, analyzing the strengths and weaknesses of each method and the possible bias in a sample or display.	SE: Samples and Populations 29-33, 36-37, 46
	TG: Samples and Populations 59-66, 71-72, 74-75
8.4.3 Use mean, median, mode, upper and lower quartiles and range to compare data sets. Organize and display data to highlight important features such as the range and how the data is spread around a central value. Investigate what happens to the display when some of the data values are changed.	SE: Samples and Populations 4, 9, 19, 22, 23, 34-35, 40, 46, 59, 74, 84, 86-87, 90
	TG: Samples and Populations 49-50, 72, 74-75, 108
8.4.4 Analyze, interpret and display data in box-and-whisker plots.	SE: Samples and Populations 12-16, 18-19, 22, 25, 32, 50, 53, 54, 59, 67, 75-76, 78, 83-86
	TG: Samples and Populations 31-46, 47-51, 108-109
8.4.5 Display two-variable data in scatter plots and describe how the data points are distributed. If the pattern appears to be linear, draw a line that appears to best fit the data and write the equation of that line.	SE: Samples and Populations 62-65, 68, 69-71, 73-74, 76, 79, 80, 84-85, 88
	TG: Samples and Populations 96-102, 107-109
8.4.6 Describe and apply the addition rule for probabilities for simple events that are mutually exclusive and for simple events that are not.	SE: Taught in Grade 7: What Do You Expect 18, 20-26, 27-31, 37
	TG: Taught in Grade 7: What Do You Expect 35, 38-54, 55-56, 58
8.4.7 Compute probabilities of events from simple experiments with equally probable outcomes, using such methods as organized list, tree diagrams and area models.	SE: Taught in Grade 7: What Do You Expect 11-12, 14-15, 18, 20-26, 27-30, 33, 66, 69
	TG: Taught in Grade 7: What Do You Expect 33-35, 38-54, 55-56