



**North Dakota Mathematics Content and
Achievement Standards
Grades 9-10
Contemporary Mathematics in Context
A Unified Approach Course 2 © 2003**

North Dakota Department of Public Instruction

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Standard 1: Number and Operation

Standard 1: Students understand and use basic and advanced concepts of number and number systems.				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grades 9-10				
NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS 9-10.1.1. Express numbers between one-billionth and one billion in fraction, decimal, and verbal form; express numbers of all magnitudes in scientific notation	<p>Students express numbers between one-billionth and one billion in fraction, decimal, and verbal form with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 412.</p> <p>Students express numbers of all magnitudes in scientific notation with no errors.</p> <p>Student Edition: 244 #4c</p>	<p>Students express numbers between one-billionth and one billion in fraction, decimal, and verbal form with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 412.</p> <p>Students express numbers of all magnitudes in scientific notation with no significant errors.</p> <p>Student Edition: 244 #4c</p>	<p>Students express numbers between one-billionth and one billion in fraction, decimal, and verbal form with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 412.</p> <p>Students express numbers of all magnitudes in scientific notation with a few significant errors.</p> <p>Student Edition: 244 #4c</p>	<p>Students express numbers between one-billionth and one billion in fraction, decimal, and verbal form with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 412.</p> <p>Students express numbers of all magnitudes in scientific notation with many significant errors.</p> <p>Student Edition: 244 #4c</p>
9-10.1.2. Describe the hierarchal relationships (e.g., integers are rationals) among subsets of the real number system; i.e., reals, rationals, irrationals, integers, wholes, and naturals	<p>Students describe with great detail the relationships between subsets of the real number system.</p> <p>Teacher's Guide: I T42</p>	<p>Students describe with adequate detail the relationships between subsets of the real number system.</p> <p>Teacher's Guide: I T42</p>	<p>Students describe with some detail the relationships between subsets of the real number system.</p> <p>Teacher's Guide: I T42</p>	<p>Students describe with minimal detail the relationships between subsets of the real number system.</p> <p>Teacher's Guide: I T42</p>

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Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.1.3. Identify the properties of the real number system; i.e., commutative, associative, distributive, closure, inverse, and identity properties	<p>Students identify the properties of the real number system with no errors.</p> <p>Student Edition: 42 #2a, 43 #5a, 44 #8, 50 #5c, 52 #4, 54 #4 <i>Checkpoint 45</i> <i>On Your Own 45</i></p> <p>Teacher’s Guide: CMT T45; I T42</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 13</p>	<p>Students identify the properties of the real number system with no significant errors.</p> <p>Student Edition: 42 #2a, 43 #5a, 44 #8, 50 #5c, 52 #4, 54 #4 <i>Checkpoint 45</i> <i>On Your Own 45</i></p> <p>Teacher’s Guide: CMT T45; I T42</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 13</p>	<p>Students identify the properties of the real number system with a few significant errors.</p> <p>Student Edition: 42 #2a, 43 #5a, 44 #8, 50 #5c, 52 #4, 54 #4 <i>Checkpoint 45</i> <i>On Your Own 45</i></p> <p>Teacher’s Guide: CMT T45; I T42</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 13</p>	<p>Students identify the properties of the real number system with many significant errors.</p> <p>Student Edition: 42 #2a, 43 #5a, 44 #8, 50 #5c, 52 #4, 54 #4 <i>Checkpoint 45</i> <i>On Your Own 45</i></p> <p>Teacher’s Guide: CMT T45; I T42</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 13</p>
9-10.1.4. Represent a set of data in a matrix	<p>Students represent a set of data in a matrix with no errors.</p> <p>Student Edition: 3 #2, 4 #3b, 11 #2, 12 #6, 14 #1a, 16 #2b, 17 #3b, 22 #2 <i>Checkpoint 5</i> <i>On Your Own 5</i></p> <p>Teacher’s Guide: I T3</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 3</p>	<p>Students represent a set of data in a matrix with no significant errors.</p> <p>Student Edition: 3 #2, 4 #3b, 11 #2, 12 #6, 14 #1a, 16 #2b, 17 #3b, 22 #2 <i>Checkpoint 5</i> <i>On Your Own 5</i></p> <p>Teacher’s Guide: I T3</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 3</p>	<p>Students represent a set of data in a matrix with a few significant errors.</p> <p>Student Edition: 3 #2, 4 #3b, 11 #2, 12 #6, 14 #1a, 16 #2b, 17 #3b, 22 #2 <i>Checkpoint 5</i> <i>On Your Own 5</i></p> <p>Teacher’s Guide: I T3</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 3</p>	<p>Students represent a set of data in a matrix with many significant errors.</p> <p>Student Edition: 3 #2, 4 #3b, 11 #2, 12 #6, 14 #1a, 16 #2b, 17 #3b, 22 #2 <i>Checkpoint 5</i> <i>On Your Own 5</i></p> <p>Teacher’s Guide: I T3</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 3</p>

Standard 1: Students understand and use basic and advanced concepts of number and number systems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
OPERATIONS AND THEIR PROPERTIES				
9-10.1.5. Use the order of operations and properties of exponents to simplify an algebraic expression	<p>Students use the order of operations and properties of exponents to simplify an algebraic expression with no errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students use the order of operations and properties of exponents to simplify an algebraic expression with no significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students use the order of operations and properties of exponents to simplify an algebraic expression with a few significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students use the order of operations and properties of exponents to simplify an algebraic expression with many significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>
9-10.1.6. Analyze the effects of multiplication, division, raising to a power, and extracting a root on the magnitudes of quantities; e.g., when will the square root of a number be greater than the number itself, or what will happen to the magnitude of a number when you multiply it by a negative number?	<p>Students analyze in great detail the effects of multiplication, division, raising to a power, and extracting a root on the magnitudes of quantities.</p> <p>Student Edition: 291 #2e, 292 #3, 298 #1, 301 #6j, 305 #1, 308 #1 <i>On Your Own</i> 293, 300 <i>Checkpoint</i> 299</p> <p>Teacher's Guide: CMT T293</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 100, 103</p>	<p>Students analyze with adequate detail the effects of multiplication, division, raising to a power, and extracting a root on the magnitudes of quantities.</p> <p>Student Edition: 291 #2e, 292 #3, 298 #1, 301 #6j, 305 #1, 308 #1 <i>On Your Own</i> 293, 300 <i>Checkpoint</i> 299</p> <p>Teacher's Guide: CMT T293</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 100, 103</p>	<p>Students analyze with some detail the effects of multiplication, division, raising to a power, and extracting a root on the magnitudes of quantities.</p> <p>Student Edition: 291 #2e, 292 #3, 298 #1, 301 #6j, 305 #1, 308 #1 <i>On Your Own</i> 293, 300 <i>Checkpoint</i> 299</p> <p>Teacher's Guide: CMT T293</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 100, 103</p>	<p>Students analyze with minimal detail the effects of multiplication, division, raising to a power, and extracting a root on the magnitudes of quantities.</p> <p>Student Edition: 291 #2e, 292 #3, 298 #1, 301 #6j, 305 #1, 308 #1 <i>On Your Own</i> 293, 300 <i>Checkpoint</i> 299</p> <p>Teacher's Guide: CMT T293</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 100, 103</p>

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Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.1.7. Apply basic properties of exponents to simplify algebraic expressions; i.e., power of a product, power of a power, products and quotients of powers, zero and negative exponents</p>	<p>Students apply basic properties of exponents to simplify algebraic expressions with no errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students apply basic properties of exponents to simplify algebraic expressions with no significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students apply basic properties of exponents to simplify algebraic expressions with a few significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>	<p>Students apply basic properties of exponents to simplify algebraic expressions with many significant errors.</p> <p>Student Edition: 300-302, 306 #2-#3, 307 #1, 308 #2, 309 #3</p> <p>Teacher's Guide: CMT T302</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 104 Unit 4</p>
COMPUTATIONAL FLUENCY AND ESTIMATION				
<p>9-10.1.8. Apply estimation skills to predict realistic solutions to problems</p>	<p>Students apply estimation skills with ease to predict a realistic solution to a problem.</p> <p>Student Edition: 21 #3e, 64 #3e, 69 #2c, 193 #8a, 224 #3, 226 #4e, 267 #3b, 278 #1a, 283 #1b <i>On Your Own</i> 191</p>	<p>Students apply estimation skills with minimal difficulty to predict a realistic solution to a problem.</p> <p>Student Edition: 21 #3e, 64 #3e, 69 #2c, 193 #8a, 224 #3, 226 #4e, 267 #3b, 278 #1a, 283 #1b <i>On Your Own</i> 191</p>	<p>Students apply estimation skills with difficulty to predict a realistic solution to a problem.</p> <p>Student Edition: 21 #3e, 64 #3e, 69 #2c, 193 #8a, 224 #3, 226 #4e, 267 #3b, 278 #1a, 283 #1b <i>On Your Own</i> 191</p>	<p>Students apply estimation skills with great difficulty to predict a realistic solution to a problem.</p> <p>Student Edition: 21 #3e, 64 #3e, 69 #2c, 193 #8a, 224 #3, 226 #4e, 267 #3b, 278 #1a, 283 #1b <i>On Your Own</i> 191</p>

Standard 1: Students understand and use basic and advanced concepts of number and number systems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.1.9. Select and use a computational technique (i.e., mental calculation, paper-and-pencil, or technology) to solve problems involving real numbers	<p>Students select and use a computational technique with ease.</p> <p>Student Edition: 18 #5, 24 #3, 68 #5b, 69 #1c, 71 #2c, 72 #2, 77 #3, 245 #5a, 257, 261 #4b</p>	<p>Students select and use a computational technique with minimal difficulty.</p> <p>Student Edition: 18 #5, 24 #3, 68 #5b, 69 #1c, 71 #2c, 72 #2, 77 #3, 245 #5a, 257, 261 #4b</p>	<p>Students select and use a computational technique with difficulty.</p> <p>Student Edition: 18 #5, 24 #3, 68 #5b, 69 #1c, 71 #2c, 72 #2, 77 #3, 245 #5a, 257, 261 #4b</p>	<p>Students select and use a computational technique with great difficulty.</p> <p>Student Edition: 18 #5, 24 #3, 68 #5b, 69 #1c, 71 #2c, 72 #2, 77 #3, 245 #5a, 257, 261 #4b</p>
9-10.1.10. Explain the reasonableness of a problem's solution and the process used to obtain it	<p>Students explain in great detail the reasonableness of a problem's solution along with the process used to obtain it.</p> <p>Student Edition: 10 #1b, 21 #3f, 43 #5c, 49 #4f, 52 #4b, 54 #4b, 73 #3, 82 #2c, 224 #3, 226 #4f</p>	<p>Students explain with adequate detail the reasonableness of a problem's solution along with the process used to obtain it.</p> <p>Student Edition: 10 #1b, 21 #3f, 43 #5c, 49 #4f, 52 #4b, 54 #4b, 73 #3, 82 #2c, 224 #3, 226 #4f</p>	<p>Students explain with some detail the reasonableness of a problem's solution along with the process used to obtain it.</p> <p>Student Edition: 10 #1b, 21 #3f, 43 #5c, 49 #4f, 52 #4b, 54 #4b, 73 #3, 82 #2c, 224 #3, 226 #4f</p>	<p>Students explain with minimal detail the reasonableness of a problem's solution along with the process used to obtain it.</p> <p>Student Edition: 10 #1b, 21 #3f, 43 #5c, 49 #4f, 52 #4b, 54 #4b, 73 #3, 82 #2c, 224 #3, 226 #4f</p>
9-10.1.11. Add, subtract, and perform scalar multiplication on matrices	<p>Students add, subtract, and perform scalar multiplication on matrices with no errors.</p> <p>Student Edition: 11 #2, 14 #1, 28 #4, 29 #6, 31-32 #1 <i>Checkpoint</i> 12, 34 <i>On Your Own</i> 13, 30, 35</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 25b, 130b</p>	<p>Students add, subtract, and perform scalar multiplication on matrices with no significant errors.</p> <p>Student Edition: 11 #2, 14 #1, 28 #4, 29 #6, 31-32 #1 <i>Checkpoint</i> 12, 34 <i>On Your Own</i> 13, 30, 35</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 25b, 130b</p>	<p>Students add, subtract, and perform scalar multiplication on matrices with a few significant errors.</p> <p>Student Edition: 11 #2, 14 #1, 28 #4, 29 #6, 31-32 #1 <i>Checkpoint</i> 12, 34 <i>On Your Own</i> 13, 30, 35</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 25b, 130b</p>	<p>Students add, subtract, and perform scalar multiplication on matrices with many significant errors.</p> <p>Student Edition: 11 #2, 14 #1, 28 #4, 29 #6, 31-32 #1 <i>Checkpoint</i> 12, 34 <i>On Your Own</i> 13, 30, 35</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 25b, 130b</p>

Standard 2: Geometry and Spatial Sense

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grades 9-10 TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS 9-10.2.1. Identify the properties and attributes of two- and three-dimensional objects that distinguish one from another; e.g., a cylinder has two parallel circular bases	<p>Students identify the properties and attributes of two- and three-dimensional objects that distinguish one from another with no errors.</p> <p>Student Edition: 88 #3, 89 #5, 91 #2, 92 #5, 94 #5, 371-372, 373-376 <i>Checkpoint 90</i></p> <p>Teacher's Guide: LO T368</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30, 31, 133, 135</p>	<p>Students identify the properties and attributes of two- and three-dimensional objects that distinguish one from another with no significant errors.</p> <p>Student Edition: 88 #3, 89 #5, 91 #2, 92 #5, 94 #5, 371-372, 373-376 <i>Checkpoint 90</i></p> <p>Teacher's Guide: LO T368</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30, 31, 133, 135</p>	<p>Students identify the properties and attributes of two- and three-dimensional objects that distinguish one from another with a few significant errors.</p> <p>Student Edition: 88 #3, 89 #5, 91 #2, 92 #5, 94 #5, 371-372, 373-376 <i>Checkpoint 90</i></p> <p>Teacher's Guide: LO T368</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30, 31, 133, 135</p>	<p>Students identify the properties and attributes of two- and three-dimensional objects that distinguish one from another with many significant errors.</p> <p>Student Edition: 88 #3, 89 #5, 91 #2, 92 #5, 94 #5, 371-372, 373-376 <i>Checkpoint 90</i></p> <p>Teacher's Guide: LO T368</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30, 31, 133, 135</p>

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations		PROFICIENCY DESCRIPTOR			
		ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.2.2.	Determine congruence and similarity among geometric objects	<p>Students determine congruence and similarity among geometric objects with no errors.</p> <p>Student Edition: 127 #2, 128 #4, 129 #5, 373-376, 380 #3, 382 #4, 383 #5, 395 #1 <i>On Your Own</i> 130</p> <p>Teacher's Guide: CMT T376</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 135</p>	<p>Students determine congruence and similarity among geometric objects with no significant errors.</p> <p>Student Edition: 127 #2, 128 #4, 129 #5, 373-376, 380 #3, 382 #4, 383 #5, 395 #1 <i>On Your Own</i> 130</p> <p>Teacher's Guide: CMT T376</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 135</p>	<p>Students determine congruence and similarity among geometric objects with a few significant errors.</p> <p>Student Edition: 127 #2, 128 #4, 129 #5, 373-376, 380 #3, 382 #4, 383 #5, 395 #1 <i>On Your Own</i> 130</p> <p>Teacher's Guide: CMT T376</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 135</p>	<p>Students determine congruence and similarity among geometric objects with many significant errors.</p> <p>Student Edition: 127 #2, 128 #4, 129 #5, 373-376, 380 #3, 382 #4, 383 #5, 395 #1 <i>On Your Own</i> 130</p> <p>Teacher's Guide: CMT T376</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 135</p>
9-10.2.3.	Use trigonometric relationships and the Pythagorean Theorem to determine side lengths and angle measures in right triangles	<p>Students use trigonometric relationships and the Pythagorean Theorem to determine side lengths and angle measures in right triangles with no errors.</p> <p>Student Edition: 83 #6c, 290, 384-388, 389-394, 395-399, 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T395, T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 148b</p>	<p>Students use trigonometric relationships and the Pythagorean Theorem to determine side lengths and angle measures in right triangles with no significant errors.</p> <p>Student Edition: 83 #6c, 290, 384-388, 389-394, 395-399, 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T395, T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 148b</p>	<p>Students use trigonometric relationships and the Pythagorean Theorem to determine side lengths and angle measures in right triangles with a few significant errors.</p> <p>Student Edition: 83 #6c, 290, 384-388, 389-394, 395-399, 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T395, T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 148b</p>	<p>Students use trigonometric relationships and the Pythagorean Theorem to determine side lengths and angle measures in right triangles with many significant errors.</p> <p>Student Edition: 83 #6c, 290, 384-388, 389-394, 395-399, 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T395, T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 148b</p>

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.2.4. Using given information, establish the validity of a conjecture using a two-column or paragraph proof</p> <p>COORDINATE GEOMETRY</p>	<p>Students use given information in great detail and make no errors in using it to establish the validity of a conjecture.</p> <p>Student Edition: 7 #4, 42 #2, 43 #5, 324 #11, 347 #3, 357 #4, 395 #1, 397 #5, 410 #1 <i>On Your Own</i> 45</p>	<p>Students use given information in adequate detail and make no significant errors in using it to establish the validity of a conjecture.</p> <p>Student Edition: 7 #4, 42 #2, 43 #5, 324 #11, 347 #3, 357 #4, 395 #1, 397 #5, 410 #1 <i>On Your Own</i> 45</p>	<p>Students use given information in some detail and make a few significant errors in using it to establish the validity of a conjecture.</p> <p>Student Edition: 7 #4, 42 #2, 43 #5, 324 #11, 347 #3, 357 #4, 395 #1, 397 #5, 410 #1 <i>On Your Own</i> 45</p>	<p>Students use given information in minimal detail and make many significant errors in using it to establish the validity of a conjecture.</p> <p>Student Edition: 7 #4, 42 #2, 43 #5, 324 #11, 347 #3, 357 #4, 395 #1, 397 #5, 410 #1 <i>On Your Own</i> 45</p>
<p>9-10.2.5. Use Cartesian coordinates to determine distance, midpoint, and slope</p>	<p>Students use Cartesian coordinates to determine distance, midpoint, and slope with no errors.</p> <p>Student Edition: 82 #3, 83 #5-#6, 85 #8, 86 #9, 88 #2, 89 #6, 91 #3, 92 #5b <i>Checkpoint</i> 84, 90</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 27, 28, 29, 32a, 32b</p>	<p>Students use Cartesian coordinates to determine distance, midpoint, and slope with no significant errors.</p> <p>Student Edition: 82 #3, 83 #5-#6, 85 #8, 86 #9, 88 #2, 89 #6, 91 #3, 92 #5b <i>Checkpoint</i> 84, 90</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 27, 28, 29, 32a, 32b</p>	<p>Students use Cartesian coordinates to determine distance, midpoint, and slope with a few significant errors.</p> <p>Student Edition: 82 #3, 83 #5-#6, 85 #8, 86 #9, 88 #2, 89 #6, 91 #3, 92 #5b <i>Checkpoint</i> 84, 90</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 27, 28, 29, 32a, 32b</p>	<p>Students use Cartesian coordinates to determine distance, midpoint, and slope with many significant errors.</p> <p>Student Edition: 82 #3, 83 #5-#6, 85 #8, 86 #9, 88 #2, 89 #6, 91 #3, 92 #5b <i>Checkpoint</i> 84, 90</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 27, 28, 29, 32a, 32b</p>

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.2.6. Use distance, midpoint, and slope to determine relationships between points, lines, and plane figures in the Cartesian coordinate system; e.g., determine whether a triangle is scalene, isosceles, or equilateral given the coordinates of its vertices</p>	<p>Students use distance, midpoint, and slope to determine the relationships between points, lines, and plane figures in the Cartesian coordinate system with no errors.</p> <p>Student Edition: 81 #1a, 82 #3, 83 #4, 88 #2, 89 #4, 91 #2, 92 #5, 94 #5, 96 #3 <i>Checkpoint 90</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students use distance, midpoint, and slope to determine the relationships between points, lines, and plane figures in the Cartesian coordinate system with no significant errors.</p> <p>Student Edition: 81 #1a, 82 #3, 83 #4, 88 #2, 89 #4, 91 #2, 92 #5, 94 #5, 96 #3 <i>Checkpoint 90</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students use distance, midpoint, and slope to determine the relationships between points, lines, and plane figures in the Cartesian coordinate system with a few significant errors.</p> <p>Student Edition: 81 #1a, 82 #3, 83 #4, 88 #2, 89 #4, 91 #2, 92 #5, 94 #5, 96 #3 <i>Checkpoint 90</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students use distance, midpoint, and slope to determine the relationships between points, lines, and plane figures in the Cartesian coordinate system with many significant errors.</p> <p>Student Edition: 81 #1a, 82 #3, 83 #4, 88 #2, 89 #4, 91 #2, 92 #5, 94 #5, 96 #3 <i>Checkpoint 90</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>
TRANSFORMATION AND SYMMETRY				
<p>9-10.2.7. Identify and perform transformations of objects in the plane using sketches (translations, reflections, rotations, and dilations) and coordinates (translations, reflections, and dilations)</p>	<p>Students identify and perform transformations of objects in the plane with no errors.</p> <p>Student Edition: 148 #4, 151 #3, 155 #1, 157 #1, 158 #3, 159 #5, 160 #4, 166 #3, 167 #5 <i>On Your Own 154</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 49a, 50, 53, 54</p>	<p>Students identify and perform transformations of objects in the plane with no significant errors.</p> <p>Student Edition: 148 #4, 151 #3, 155 #1, 157 #1, 158 #3, 159 #5, 160 #4, 166 #3, 167 #5 <i>On Your Own 154</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 49a, 50, 53, 54</p>	<p>Students identify and perform transformations of objects in the plane with a few significant errors.</p> <p>Student Edition: 148 #4, 151 #3, 155 #1, 157 #1, 158 #3, 159 #5, 160 #4, 166 #3, 167 #5 <i>On Your Own 154</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 49a, 50, 53, 54</p>	<p>Students identify and perform transformations of objects in the plane with many significant errors.</p> <p>Student Edition: 148 #4, 151 #3, 155 #1, 157 #1, 158 #3, 159 #5, 160 #4, 166 #3, 167 #5 <i>On Your Own 154</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 49a, 50, 53, 54</p>

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.2.8. Describe the effects of combining basic transformations in a plane; e.g., two reflections over parallel lines results in a translation</p>	<p>Students describe, in great detail, the results of combining basic transformations in a plane.</p> <p>Student Edition: 138-143, 145 #1, 146 #2-#4, 147 #4, 148 #4, 161 #3c, 162 #1, 167 #4</p> <p>Teacher’s Guide: CMT T143; I T139</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 47, 48, 49a, 49b</p>	<p>Students describe, in adequate detail, the results of combining basic transformations in a plane.</p> <p>Student Edition: 138-143, 145 #1, 146 #2-#4, 147 #4, 148 #4, 161 #3c, 162 #1, 167 #4</p> <p>Teacher’s Guide: CMT T143; I T139</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 47, 48, 49a, 49b</p>	<p>Students describe, in some detail, the results of combining basic transformations in a plane.</p> <p>Student Edition: 138-143, 145 #1, 146 #2-#4, 147 #4, 148 #4, 161 #3c, 162 #1, 167 #4</p> <p>Teacher’s Guide: CMT T143; I T139</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 47, 48, 49a, 49b</p>	<p>Students describe, with minimal detail, the results of combining basic transformations in a plane.</p> <p>Student Edition: 138-143, 145 #1, 146 #2-#4, 147 #4, 148 #4, 161 #3c, 162 #1, 167 #4</p> <p>Teacher’s Guide: CMT T143; I T139</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 47, 48, 49a, 49b</p>
<p>VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING</p>				
<p>9-10.2.9. Construct plane figures using traditional and/or technological tools; i.e., congruent segments, congruent angles, angle and segment bisectors, perpendicular and parallel lines</p>	<p>Students construct plane figures with no errors using traditional and/or technological tools.</p> <p>Student Edition: 81 #1, 83 #4, 87 #3, 88 #3, 89 #5b, 91 #3 <i>On Your Own</i> 87 <i>Think About This Situation</i> 80</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 29, 34a</p>	<p>Students construct plane figures with no significant errors using traditional and/or technological tools.</p> <p>Student Edition: 81 #1, 83 #4, 87 #3, 88 #3, 89 #5b, 91 #3 <i>On Your Own</i> 87 <i>Think About This Situation</i> 80</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 29, 34a</p>	<p>Students construct plane figures with a few significant errors using traditional and/or technological tools.</p> <p>Student Edition: 81 #1, 83 #4, 87 #3, 88 #3, 89 #5b, 91 #3 <i>On Your Own</i> 87 <i>Think About This Situation</i> 80</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 29, 34a</p>	<p>Students construct plane figures with many significant errors using traditional and/or technological tools.</p> <p>Student Edition: 81 #1, 83 #4, 87 #3, 88 #3, 89 #5b, 91 #3 <i>On Your Own</i> 87 <i>Think About This Situation</i> 80</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 29, 34a</p>

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.2.10. Recognize images of the same object shown from different perspectives; i.e., a two-dimensional image of a three-dimensional object	<p>Students recognize images of the same object shown from different perspectives with no errors.</p> <p>Student Edition: 95 #1, 97 #1, 105 #4</p>	<p>Students recognize images of the same object shown from different perspectives with no significant errors.</p> <p>Student Edition: 95 #1, 97 #1, 105 #4</p>	<p>Students recognize images of the same object shown from different perspectives with a few significant errors.</p> <p>Student Edition: 95 #1, 97 #1, 105 #4</p>	<p>Students recognize images of the same object shown from different perspectives with many significant errors.</p> <p>Student Edition: 95 #1, 97 #1, 105 #4</p>
9-10.2.11. Use geometric models to find solutions to problems in mathematics and other disciplines; e.g., art and architecture	<p>Students use geometric models to find solutions to problems in mathematics and other disciplines with no errors.</p> <p>Student Edition: 91 #3, 92 #6, 95 #2, 97 #1, 103 #4, 111 #1, 370-372, 373-376, 377-383</p> <p>Teacher's Guide: I T370</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 133, 135, 136</p>	<p>Students use geometric models to find solutions to problems in mathematics and other disciplines with no significant errors.</p> <p>Student Edition: 91 #3, 92 #6, 95 #2, 97 #1, 103 #4, 111 #1, 370-372, 373-376, 377-383</p> <p>Teacher's Guide: I T370</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 133, 135, 136</p>	<p>Students use geometric models to find solutions to problems in mathematics and other disciplines with a few significant errors.</p> <p>Student Edition: 91 #3, 92 #6, 95 #2, 97 #1, 103 #4, 111 #1, 370-372, 373-376, 377-383</p> <p>Teacher's Guide: I T370</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 133, 135, 136</p>	<p>Students use geometric models to find solutions to problems in mathematics and other disciplines with many significant errors.</p> <p>Student Edition: 91 #3, 92 #6, 95 #2, 97 #1, 103 #4, 111 #1, 370-372, 373-376, 377-383</p> <p>Teacher's Guide: I T370</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 133, 135, 136</p>

Standard 3: Data Analysis, Statistics, and Probability

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems.				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grades 9-10				
<p>DATA COLLECTION, DISPLAY, AND INTERPRETATION</p> <p>9-10.3.1. Construct appropriate displays of given data; i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots</p>	<p>Students construct a display for a given set of data with no errors.</p> <p>Student Edition: 171 #1a, 174 #3, 180 #2, 184 #1a, 189 #4a, 200 #1, 205 #2a, 209 #2 <i>Checkpoint 173</i> <i>On Your Own 179</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 56, 58, 59</p>	<p>Students construct a display for a given set of data with no significant errors.</p> <p>Student Edition: 171 #1a, 174 #3, 180 #2, 184 #1a, 189 #4a, 200 #1, 205 #2a, 209 #2 <i>Checkpoint 173</i> <i>On Your Own 179</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 56, 58, 59</p>	<p>Students construct a display for a given set of data with a few significant errors.</p> <p>Student Edition: 171 #1a, 174 #3, 180 #2, 184 #1a, 189 #4a, 200 #1, 205 #2a, 209 #2 <i>Checkpoint 173</i> <i>On Your Own 179</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 56, 58, 59</p>	<p>Students construct a display for a given set of data with many significant errors.</p> <p>Student Edition: 171 #1a, 174 #3, 180 #2, 184 #1a, 189 #4a, 200 #1, 205 #2a, 209 #2 <i>Checkpoint 173</i> <i>On Your Own 179</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 56, 58, 59</p>
<p>9-10.3.2. Interpret a given visual representation (i.e., circle graphs, bar graphs, histograms, stem-and-leaf plots, box-and-whisker plots, and scatter plots) of a set of data</p>	<p>Students interpret, with great detail, a given visual representation of a data set.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own 191</i> <i>Think About This Situation 187</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret, with adequate detail, a given visual representation of a data set.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own 191</i> <i>Think About This Situation 187</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret, with some detail, a given visual representation of a data set.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own 191</i> <i>Think About This Situation 187</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret, with minimal detail, a given visual representation of a data set.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own 191</i> <i>Think About This Situation 187</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.3.3. Identify the variable, sample, and population in a well-designed study; e.g., in an exit poll for a tax increase, the variable is the outcome of the vote, the sample is the set of people surveyed, the population is the set of all voters</p>	<p>Students identify the variable, sample, and population in a well-designed study with no errors.</p> <p>Student Edition: 207 #4</p>	<p>Students identify the variable, sample, and population in a well-designed study with no significant errors.</p> <p>Student Edition: 207 #4</p>	<p>Students identify the variable, sample, and population in a well-designed study with a few significant errors.</p> <p>Student Edition: 207 #4</p>	<p>Students identify the variable, sample, and population in a well-designed study with many significant errors.</p> <p>Student Edition: 207 #4</p>
PROBABILITY				
<p>9-10.3.4. Determine the number of possible outcomes for a given event, using appropriate counting techniques; e.g., fundamental counting principle, factorials, combinations, permutations</p>	<p>Students determine the number of possible outcomes for an event with no errors.</p> <p>Student Edition: 468 #2, 470 #4, 473 #2b, 474 #4, 475 #8, 483 #3, 494 #4</p>	<p>Students determine the number of possible outcomes for an event with no significant errors.</p> <p>Student Edition: 468 #2, 470 #4, 473 #2b, 474 #4, 475 #8, 483 #3, 494 #4</p>	<p>Students determine the number of possible outcomes for an event with a few significant errors.</p> <p>Student Edition: 468 #2, 470 #4, 473 #2b, 474 #4, 475 #8, 483 #3, 494 #4</p>	<p>Students determine the number of possible outcomes for an event with many significant errors.</p> <p>Student Edition: 468 #2, 470 #4, 473 #2b, 474 #4, 475 #8, 483 #3, 494 #4</p>
<p>9-10.3.5. Calculate experimental and theoretical probabilities with and without replacement</p>	<p>Students calculate experimental and theoretical probabilities with and without replacement with no errors.</p> <p>Student Edition: 460 #2, 462 #1, 466 #1, 470 #4, 471-476, 477-484, 485-488, 489-494, 495-502, 503-509</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159, 160</p>	<p>Students calculate experimental and theoretical probabilities with and without replacement with no significant arithmetic errors.</p> <p>Student Edition: 460 #2, 462 #1, 466 #1, 470 #4, 471-476, 477-484, 485-488, 489-494, 495-502, 503-509</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159, 160</p>	<p>Students calculate experimental or theoretical probabilities with and without replacement with a few significant errors.</p> <p>Student Edition: 460 #2, 462 #1, 466 #1, 470 #4, 471-476, 477-484, 485-488, 489-494, 495-502, 503-509</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159, 160</p>	<p>Students calculate experimental and theoretical probabilities with and without replacement with many significant errors.</p> <p>Student Edition: 460 #2, 462 #1, 466 #1, 470 #4, 471-476, 477-484, 485-488, 489-494, 495-502, 503-509</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159, 160</p>

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.3.6. Calculate probabilities of compound events using addition and multiplication rules</p>	<p>Students use addition and multiplication rules to calculate probabilities of compound events with no errors.</p> <p>Student Edition: 467 #4, 469 #2, 471-476, 477-484, 489-494</p> <p>Teacher's Guide: CMT T488; I T472; N T485</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159</p>	<p>Students use addition and multiplication rules to calculate probabilities of compound events with no significant errors.</p> <p>Student Edition: 467 #4, 469 #2, 471-476, 477-484, 489-494</p> <p>Teacher's Guide: CMT T488; I T472; N T485</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159</p>	<p>Students use addition and multiplication rules to calculate probabilities of compound events with a few significant errors.</p> <p>Student Edition: 467 #4, 469 #2, 471-476, 477-484, 489-494</p> <p>Teacher's Guide: CMT T488; I T472; N T485</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159</p>	<p>Students use addition and multiplication rules to calculate probabilities of compound events with many significant errors.</p> <p>Student Edition: 467 #4, 469 #2, 471-476, 477-484, 489-494</p> <p>Teacher's Guide: CMT T488; I T472; N T485</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 159</p>
<p>STATISTICAL METHODS</p>				
<p>9-10.3.7. Calculate measures of central tendency and spread; i.e., mean, median, mode, range, and quartiles</p>	<p>Students calculate measures of central tendency and spread with no errors.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students calculate measures of central tendency and spread with no significant errors.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students calculate measures of central tendency and spread with a few significant errors.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students calculate measures of central tendency and spread with many significant errors.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.3.8. Discuss relationships among measures of central tendency and spread; i.e., mean, median, mode, range, and quartiles</p>	<p>Students discuss, in great detail, the relationships among measures of central tendency and spread.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students discuss, in adequate detail, the relationships among measures of central tendency and spread.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students discuss, in some detail, the relationships among measures of central tendency and spread.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>	<p>Students discuss, in minimal detail, the relationships among measures of central tendency and spread.</p> <p>Student Edition: 91 #4, 109</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 130b</p>
<p>PREDICTIONS, DATA ANALYSIS, AND INFERENCES</p>				
<p>9-10.3.9. Select two points and approximate an equation for the line of best fit (if appropriate) for a set of data</p>	<p>Students select two points, and determine an equation that approximates the line of best fit with no errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students select two points, and determine an equation that approximates the line of best fit with no significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students select two points, and determine an equation that approximates the line of best fit with a few significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students select two points, and determine an equation that approximates the line of best fit with many significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.3.10. Identify the trend of a set of data and estimate the strength of the correlation between two variables; e.g., strong vs. weak, positive vs. negative	<p>Students identify the trend of a set of data and provide an estimate of the strength of the correlation between two variables with no errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students identify the trend of a set of data and provide an estimate of the strength of the correlation between two variables with no significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students identify the trend of a set of data and provide an estimate of the strength of the correlation between two variables with a few significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students identify the trend of a set of data and provide an estimate of the strength of the correlation between two variables with many significant errors.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>

Standard 4: Measurement

Standard 4: Students use concepts and tools of measurement to describe and quantify the world..				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grades 9-10				
MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS 9-10.4.1. Select appropriate units and scales for problem situations involving measurement	Students select appropriate units and scales for problem situations involving measurement with ease. Student Edition: 242 #1e	Students select appropriate units and scales for problem situations involving measurement with minimal difficulty. Student Edition: 242 #1e	Students select appropriate units and scales for problem situations involving measurement with difficulty. Student Edition: 242 #1e	Students select appropriate units and scales for problem situations involving measurement with great difficulty. Student Edition: 242 #1e
9-10.4.2. Describe the effects of scalar change on the area and volume of a figure; e.g., the effect of doubling one or more edges of a solid on its surface area and volume	Students describe with great detail the effects of scalar change on area and volume. Student Edition: 235 #1, 236 #2, 239 #1, 241 #1b, 242 #2e, 243-244 #4, 246 #1, 247-248 #3 <i>Checkpoint 237</i> <i>On Your Own 238</i> Teacher Resources: <i>Teaching Resources</i> Master 81, 82, 83	Students describe with adequate detail the effects of scalar change on area and volume. Student Edition: 235 #1, 236 #2, 239 #1, 241 #1b, 242 #2e, 243-244 #4, 246 #1, 247-248 #3 <i>Checkpoint 237</i> <i>On Your Own 238</i> Teacher Resources: <i>Teaching Resources</i> Master 81, 82, 83	Students describe with some detail the effects of scalar change on area and volume. Student Edition: 235 #1, 236 #2, 239 #1, 241 #1b, 242 #2e, 243-244 #4, 246 #1, 247-248 #3 <i>Checkpoint 237</i> <i>On Your Own 238</i> Teacher Resources: <i>Teaching Resources</i> Master 81, 82, 83	Students describe with minimal detail the effects of scalar change on area and volume. Student Edition: 235 #1, 236 #2, 239 #1, 241 #1b, 242 #2e, 243-244 #4, 246 #1, 247-248 #3 <i>Checkpoint 237</i> <i>On Your Own 238</i> Teacher Resources: <i>Teaching Resources</i> Master 81, 82, 83

Standard 4: Students use concepts and tools of measurement to describe and quantify the world..

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.4.3. Use approximations to compare the standard and metric systems of measurement; e.g., a five-kilometer race is about three miles long</p>	<p>Students use approximations to compare the standard and metric systems of measurement with ease.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students use approximations to compare the standard and metric systems of measurement with minimal difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students use approximations to compare the standard and metric systems of measurement with difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students use approximations to compare the standard and metric systems of measurement with great difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>
<p>9-10.4.4. Given a conversion factor, convert between standard and metric measurements</p>	<p>Students convert between standard and metric measurements with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students convert between standard and metric measurements with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students convert between standard and metric measurements with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>	<p>Students convert between standard and metric measurements with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 67 and 241.</p>

Standard 4: Students use concepts and tools of measurement to describe and quantify the world..

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS</p> <p>9-10.4.5. Use methods necessary to achieve a specified degree of precision and accuracy (i.e., appropriate number of significant digits) in measurement situations</p> <p>9-10.4.6. Employ estimation techniques to evaluate reasonableness of results in measurement situations</p>	<p>Students use methods necessary to achieve a specified degree of precision and accuracy in a measurement situation with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 4-6.</p> <p>Students employ estimation techniques to evaluate the reasonableness of results in measurement situations with ease.</p> <p>Student Edition: 401 #2f, 402 #4d, 403 #5, 404 #8, 407 #3c, 411 #4c</p>	<p>Students use methods necessary to achieve a specified degree of precision and accuracy in a measurement situation with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 4-6.</p> <p>Students employ estimation techniques to evaluate the reasonableness of results in measurement situations with minimal difficulty.</p> <p>Student Edition: 401 #2f, 402 #4d, 403 #5, 404 #8, 407 #3c, 411 #4c</p>	<p>Students use methods necessary to achieve a specified degree of precision and accuracy in a measurement situation with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 4-6.</p> <p>Students employ estimation techniques to evaluate the reasonableness of results in measurement situations with difficulty.</p> <p>Student Edition: 401 #2f, 402 #4d, 403 #5, 404 #8, 407 #3c, 411 #4c</p>	<p>Students use methods necessary to achieve a specified degree of precision and accuracy in a measurement situation with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 4-6.</p> <p>Students employ estimation techniques to evaluate the reasonableness of results in measurement situations with great difficulty.</p> <p>Student Edition: 401 #2f, 402 #4d, 403 #5, 404 #8, 407 #3c, 411 #4c</p>

Standard 4: Students use concepts and tools of measurement to describe and quantify the world..				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.4.7. Use unit analysis to track units during computations	<p>Students use unit analysis to track units during computations with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 366 and 376.</p>	<p>Students use unit analysis to track units during computations with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 366 and 376.</p>	<p>Students use unit analysis to track units during computations with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 366 and 376.</p>	<p>Students use unit analysis to track units during computations with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 366 and 376.</p>
9-10.4.8. Given a formula list, compute the area of a regular polygon	<p>Students compute the area of a regular polygon with no errors.</p> <p>Student Edition: 235 #1, 241 #1, 248 #3e <i>Checkpoint 237</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 82</p>	<p>Students compute the area of a regular polygon with no significant errors.</p> <p>Student Edition: 235 #1, 241 #1, 248 #3e <i>Checkpoint 237</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 82</p>	<p>Students compute the area of a regular polygon with a few significant errors.</p> <p>Student Edition: 235 #1, 241 #1, 248 #3e <i>Checkpoint 237</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 82</p>	<p>Students compute the area of a regular polygon, with many significant errors.</p> <p>Student Edition: 235 #1, 241 #1, 248 #3e <i>Checkpoint 237</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 82</p>

Standard 4: Students use concepts and tools of measurement to describe and quantify the world..

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.4.9. Given a formula list, compute the surface area and volume of a right prism, right cylinder, right pyramid, right cone, and sphere	<p>Students compute the surface area and volume of a right prism, right cylinder, right pyramid, right cone, and sphere with no errors.</p> <p>Student Edition: 137 #3, 235 #1, 236 #1, 239 #1, 241 #1, 243 #4, 247-248 #3, 409 #5f <i>Checkpoint 237</i> <i>On Your Own 238</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 80b, 82</p>	<p>Students compute the surface area and volume of a right prism, right cylinder, right pyramid, right cone, and sphere with no significant errors.</p> <p>Student Edition: 137 #3, 235 #1, 236 #1, 239 #1, 241 #1, 243 #4, 247-248 #3, 409 #5f <i>Checkpoint 237</i> <i>On Your Own 238</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 80b, 82</p>	<p>Students compute the surface area and volume of a right prism, right cylinder, right pyramid, right cone, and sphere with a few significant errors.</p> <p>Student Edition: 137 #3, 235 #1, 236 #1, 239 #1, 241 #1, 243 #4, 247-248 #3, 409 #5f <i>Checkpoint 237</i> <i>On Your Own 238</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 80b, 82</p>	<p>Students compute the surface area and volume of a right prism, right cylinder, right pyramid, right cone, and sphere with many significant errors.</p> <p>Student Edition: 137 #3, 235 #1, 236 #1, 239 #1, 241 #1, 243 #4, 247-248 #3, 409 #5f <i>Checkpoint 237</i> <i>On Your Own 238</i></p> <p>Teacher Resources: <i>Teaching Resources</i> Master 80b, 82</p>
9-10.4.10. Apply indirect measurement techniques to solve problems involving irregular shapes or inaccessible objects; e.g., calculate the distance across a lake, triangulate an irregular region to find its approximate area	<p>Students apply indirect measurement techniques with ease to solve problems involving irregular shapes or inaccessible objects.</p> <p>Student Edition: 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 404, 412</p>	<p>Students apply indirect measurement techniques with minimal difficulty to solve problems involving irregular shapes or inaccessible objects.</p> <p>Student Edition: 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 404, 412</p>	<p>Students apply indirect measurement techniques with difficulty to solve problems involving irregular shapes or inaccessible objects.</p> <p>Student Edition: 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 404, 412</p>	<p>Students apply indirect measurement techniques with great difficulty to solve problems involving irregular shapes or inaccessible objects.</p> <p>Student Edition: 400-405, 406-411</p> <p>Teacher's Guide: CMT T404; I T400</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 404, 412</p>

Standard 5: Algebra, Functions and Patterns

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grades 9-10				
PATTERNS, RELATIONS, AND FUNCTIONS				
9-10.5.1. Given the explicit and/or the recursive definition of a sequence, generate a specific term (explicit formula only) or a specified number of terms	<p>Given an explicit and/or a recursive definition of a sequence, students generate the specified number of terms with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 119, 183, 337, 422, 435, and 441.</p>	<p>Given an explicit and/or a recursive definition of a sequence, students generate the specified number of terms with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 119, 183, 337, 422, 435, and 441.</p>	<p>Given an explicit and/or a recursive definition of a sequence, students generate the specified number of terms with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 119, 183, 337, 422, 435, and 441.</p>	<p>Given an explicit and/or a recursive definition of a sequence, students generate the specified number of terms with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 119, 183, 337, 422, 435, and 441.</p>
9-10.5.2. Express relations and functions using a variety of representations; i.e., numeric, graphic, symbolic, and verbal	<p>Students express relations and functions using a variety of representations with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 105-107.</p>	<p>Students express relations and functions using a variety of representations with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 105-107.</p>	<p>Students express relations and functions using a variety of representations with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 105-107.</p>	<p>Students express relations and functions using a variety of representations with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 105-107.</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.5.3. Determine whether a relation is a function by examining various representations of the relation; e.g., table, graph, equation, set of ordered pairs</p>	<p>Students determine whether a relation is a function with ease.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 101.</p>	<p>Students determine whether a relation is a function with minimal difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 101.</p>	<p>Students determine whether a relation is a function with difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on page 101.</p>	<p>Students determine whether a relation is a function with great difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 101.</p>
<p>9-10.5.4. Perform the operations of addition, subtraction, multiplication, and division on algebraic functions; e.g., given $f(x) = 2x$ and $g(x) = 5x - 7$, find $f(x) + g(x)$</p>	<p>Students perform the four basic operations on algebraic functions with no errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 239-241.</p>	<p>Students perform the four basic operations on algebraic functions with no significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 239-241.</p>	<p>Students perform the four basic operations on algebraic functions with a few significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 239-241.</p>	<p>Students perform the four basic operations on algebraic functions with many significant errors.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 239-241.</p>
<p>9-10.5.5. Identify the independent variable, dependent variable, domain, and range of a function</p>	<p>Students identify the independent variable, dependent variable, domain, and range of a function with ease.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 127, 175, 178, 188, 206, and 213.</p>	<p>Students identify the independent variable, dependent variable, domain, and range of a function with minimal difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 127, 175, 178, 188, 206, and 213.</p>	<p>Students identify the independent variable, dependent variable, domain, and range of a function with difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 127, 175, 178, 188, 206, and 213.</p>	<p>Students identify the independent variable, dependent variable, domain, and range of a function with great difficulty.</p> <p>This benchmark can be found in Glencoe's <i>Contemporary Mathematics in Context Course 1</i> © 2003 on pages 127, 175, 178, 188, 206, and 213.</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.5.6. Draw graphs of linear and quadratic functions using paper and pencil, labeling key features; e.g., graph a line and label its x-intercept and y-intercept, graph a parabola and label its vertex and one point on each side of the vertex</p>	<p>Students graph linear and quadratic functions with no errors, labeling all key features.</p> <p>Student Edition: 279 #5, 285 #2, 286 #5 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 96, 97</p>	<p>Students graph linear and quadratic functions with no significant errors, labeling most key features.</p> <p>Student Edition: 279 #5, 285 #2, 286 #5 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 96, 97</p>	<p>Students graph linear and quadratic functions with a few significant errors, labeling some key features.</p> <p>Student Edition: 279 #5, 285 #2, 286 #5 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 96, 97</p>	<p>Students graph linear and quadratic functions with many significant errors, labeling very few key features.</p> <p>Student Edition: 279 #5, 285 #2, 286 #5 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 96, 97</p>
<p>NUMERIC AND ALGEBRAIC REPRESENTATIONS</p>				
<p>9-10.5.7. Use algebraic expressions, equations, or inequalities involving one or two variables to represent relationships (e.g., given a verbal statement, write an equivalent algebraic expression or equation) found in various contexts (e.g., time and distance problems, mixture problems)</p>	<p>Students use algebraic expressions, equations, or inequalities involving one or two variables to represent relationships with no errors.</p> <p>Student Edition: 61 #4, 66 #1a, 67 #2a, 68 #5, 77 #3a <i>On Your Own</i> 63</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22</p>	<p>Students use algebraic expressions, equations, or inequalities involving one or two variables to represent relationships with no significant errors.</p> <p>Student Edition: 61 #4, 66 #1a, 67 #2a, 68 #5, 77 #3a <i>On Your Own</i> 63</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22</p>	<p>Students use algebraic expressions, equations, or inequalities involving one or two variables to represent relationships with a few significant errors.</p> <p>Student Edition: 61 #4, 66 #1a, 67 #2a, 68 #5, 77 #3a <i>On Your Own</i> 63</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22</p>	<p>Students use algebraic expressions, equations, or inequalities involving one or two variables to represent relationships with many significant errors.</p> <p>Student Edition: 61 #4, 66 #1a, 67 #2a, 68 #5, 77 #3a <i>On Your Own</i> 63</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.5.8. Manipulate algebraic expressions and equations using properties of real numbers; e.g., simplify, factor	<p>Students manipulate algebraic expressions and equations using properties of real numbers with no errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3, 279 #5, 285 #1, 286 #5e, 288 #2 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students manipulate algebraic expressions and equations using properties of real numbers with no significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3, 279 #5, 285 #1, 286 #5e, 288 #2 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students manipulate algebraic expressions and equations using properties of real numbers with a few significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3, 279 #5, 285 #1, 286 #5e, 288 #2 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students manipulate algebraic expressions and equations using properties of real numbers with many significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3, 279 #5, 285 #1, 286 #5e, 288 #2 <i>On Your Own</i> 280, 282</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>
9-10.5.9. Solve linear equations and inequalities, systems of two linear equations or inequalities, and quadratic equations having rational solutions; e.g., factoring, quadratic formula	<p>Students solve linear equations and inequalities, systems of linear equations and inequalities, and quadratic equations with no errors.</p> <p>Student Edition: 60-62, 63-65, 66-74, 75-78, 278-279, 280-282, 285 #1, 286 #1</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22, 97, 98</p>	<p>Students solve linear equations and inequalities, systems of linear equations and inequalities, and quadratic equations with no significant errors.</p> <p>Student Edition: 60-62, 63-65, 66-74, 75-78, 278-279, 280-282, 285 #1, 286 #1</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22, 97, 98</p>	<p>Students solve linear equations and inequalities, systems of linear equations and inequalities, and quadratic equations with a few significant errors.</p> <p>Student Edition: 60-62, 63-65, 66-74, 75-78, 278-279, 280-282, 285 #1, 286 #1</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22, 97, 98</p>	<p>Students solve linear equations and inequalities, systems of linear equations and inequalities, and quadratic equations with many significant errors.</p> <p>Student Edition: 60-62, 63-65, 66-74, 75-78, 278-279, 280-282, 285 #1, 286 #1</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 20, 22, 97, 98</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
<p>9-10.5.10. Solve a literal equation for a specified variable; e.g., solve $I = prt$ for r, or solve $7n + p = t$ for n</p>	<p>Students solve a literal equation for a specified variable with no errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3</p>	<p>Students solve a literal equation for a specified variable with no significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3</p>	<p>Students solve a literal equation for a specified variable with a few significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3</p>	<p>Students solve a literal equation for a specified variable with many significant errors.</p> <p>Student Edition: 64 #4, 65 #6, 69 #1d, 70 #3a, 73 #3</p>
<p>MATHEMATICAL MODELING</p>				
<p>9-10.5.11. Use essential quantitative relationships in a situation to determine whether the relationship can be modeled by a linear function; e.g., simple interest is linear, compound interest is not linear</p>	<p>Students determine with ease whether a quantitative relationship can be modeled by a linear function.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students determine with minimal difficulty whether a quantitative relationship can be modeled by a linear function.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students determine with difficulty whether a quantitative relationship can be modeled by a linear function.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>	<p>Students determine with great difficulty whether a quantitative relationship can be modeled by a linear function.</p> <p>Student Edition: 205 #2, 206 #2, 211-215, 216-219, 220-226, 227-231</p> <p>Teacher's Guide: I T212, T216; JE T231</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 71, 74, 77, 79</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.5.12. Graphically represent the solution or solutions to an equation, inequality, or system	<p>Students graphically represent the solution or solutions to an equation, inequality, or system with no errors.</p> <p>Student Edition: 276 #1, 278-279, 280-282, 285 #1, 286 #1 <i>On Your Own</i> 277</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students graphically represent the solution or solutions to an equation, inequality, or system with no significant errors.</p> <p>Student Edition: 276 #1, 278-279, 280-282, 285 #1, 286 #1 <i>On Your Own</i> 277</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students graphically represent the solution or solutions to an equation, inequality, or system with a few significant errors.</p> <p>Student Edition: 276 #1, 278-279, 280-282, 285 #1, 286 #1 <i>On Your Own</i> 277</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>	<p>Students graphically represent the solution or solutions to an equation, inequality, or system with many significant errors.</p> <p>Student Edition: 276 #1, 278-279, 280-282, 285 #1, 286 #1 <i>On Your Own</i> 277</p> <p>Teacher's Guide: CMT T281; JE T280</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 97, 98</p>
9-10.5.13. Interpret a graphical representation of a real-world situation	<p>Students interpret a graphical representation of a real-world situation with no errors.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own</i> 191 <i>Think About This Situation</i> 187</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret a graphical representation of a real-world situation with no significant errors.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own</i> 191 <i>Think About This Situation</i> 187</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret a graphical representation of a real-world situation with a few significant errors.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own</i> 191 <i>Think About This Situation</i> 187</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>	<p>Students interpret a graphical representation of a real-world situation with many significant errors.</p> <p>Student Edition: 172 #2, 174 #4, 175 #5, 183 #2, 192 #7, 193 #8, 208 #1, 213 #1 <i>On Your Own</i> 191 <i>Think About This Situation</i> 187</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 68</p>

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems.

Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
9-10.5.14. Draw conclusions about a situation being modeled	<p>Students draw conclusions about a modeled situation with no errors.</p> <p>Student Edition: 81 #1, 82 #3, 83 #4, 88 #3, 89 #4, 278 #2, 287 #2 <i>Checkpoint 297</i> <i>On Your Own 90, 293</i></p>	<p>Students draw conclusions about a modeled situation with no significant errors.</p> <p>Student Edition: 81 #1, 82 #3, 83 #4, 88 #3, 89 #4, 278 #2, 287 #2 <i>Checkpoint 297</i> <i>On Your Own 90, 293</i></p>	<p>Students draw conclusion about a modeled situation with a few significant errors.</p> <p>Student Edition: 81 #1, 82 #3, 83 #4, 88 #3, 89 #4, 278 #2, 287 #2 <i>Checkpoint 297</i> <i>On Your Own 90, 293</i></p>	<p>Students draw conclusions about a modeled situation with many significant errors.</p> <p>Student Edition: 81 #1, 82 #3, 83 #4, 88 #3, 89 #4, 278 #2, 287 #2 <i>Checkpoint 297</i> <i>On Your Own 90, 293</i></p>
RATES OF CHANGE				
9-10.5.15. Approximate and interpret rates of change from graphical and numerical data	<p>Students approximate and interpret rates of change from graphical and numerical data with no errors.</p> <p>Student Edition: 82 #1d, 87 #3, 88 #2, 89 #6, 96 #4a, 104 #1 <i>Checkpoint 90</i> <i>On Your Own 90</i></p> <p>Teacher's Guide: CMT T90; I T81</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students approximate and interpret rates of change from graphical and numerical data with no significant errors.</p> <p>Student Edition: 82 #1d, 87 #3, 88 #2, 89 #6, 96 #4a, 104 #1 <i>Checkpoint 90</i> <i>On Your Own 90</i></p> <p>Teacher's Guide: CMT T90; I T81</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students approximate and interpret rates of change from graphical and numerical data with a few significant errors.</p> <p>Student Edition: 82 #1d, 87 #3, 88 #2, 89 #6, 96 #4a, 104 #1 <i>Checkpoint 90</i> <i>On Your Own 90</i></p> <p>Teacher's Guide: CMT T90; I T81</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>	<p>Students approximate and interpret rates of change from graphical and numerical data with many significant errors.</p> <p>Student Edition: 82 #1d, 87 #3, 88 #2, 89 #6, 96 #4a, 104 #1 <i>Checkpoint 90</i> <i>On Your Own 90</i></p> <p>Teacher's Guide: CMT T90; I T81</p> <p>Teacher Resources: <i>Teaching Resources</i> Master 30</p>

Codes Used for TG Pages

CMT	Constructing a Math Toolkit
I	Investigation
JE	Journal Entry
LO	Lesson Overview
N	Note