



Algebra

Concepts and Applications

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STANDARDS	PAGE REFERENCES
GRADE 9	
Number and Operations	
1. Understand numbers, ways of representing numbers, relationships among numbers and number systems	
A. Read, write and compare numbers	
<p>compare and order rational and irrational numbers, including finding their approximate locations on a number line</p> <p>MA 5 3.3</p> <p>IX.a</p>	<p>Student Edition: 52-53, 94-97, 98 #31, 362, 600-601, 603 #8-#11, 673 #44-#46</p> <p>Teacher Wraparound Edition: ICE 602; ML 362; TT 601</p> <p>Teacher Resources: <i>Enrichment 149</i> <i>Practice 53</i> <i>Study Guide 51, 95</i></p>
B. Represent and use rational numbers	
C. Compose and decompose numbers	
D. Classify and describe numeric relationships	

STANDARDS	PAGE REFERENCES
2. Understand meanings of operations and how they relate to one another	
A. Represent operations	
B. Describe effects of operations	
<p>describe the effects of operations, such as multiplication, division, and computing powers and roots on the magnitude of quantities</p> <p>MA 4 3.4,4.1</p> <p>VIII.i</p>	<p>Student Edition:</p> <p>75-77, 82-83, 84 #34-#39, 140-143, 154-155, 338 #9-#10, 341-343, 347-349, 357-359, 362-363</p> <p>Teacher Resources:</p> <p><i>Practice</i> 73, 78, 157, 341, 361, 366</p> <p><i>Study Guide</i> 71, 76, 145, 155, 339, 359, 364</p>
C. Apply properties of operations	
<p>apply properties of exponents (including order of operations) to simplify expressions</p> <p>MA 4 1.6,1.10</p> <p>VIII.c & d</p>	<p>Student Edition:</p> <p>336-338, 339 #10-#12, 340 #31-#38, 341-343, 347-349, 350 #4-#5, 352-353</p> <p>Teacher Wraparound Edition:</p> <p>ICE 342, 343; TT 338</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 353</p> <p><i>Practice</i> 341, 346, 352</p> <p><i>Study Guide</i> 339, 344, 349</p>
D. Apply operations on real and complex numbers	
<p>apply operations to real numbers, using mental computation or paper-and-pencil calculations for simple cases and technology for more complicated cases</p> <p>MA 1,4,5 1.4,3.4</p> <p>V.a, VIII.d, IX.6</p>	<p>Student Edition:</p> <p>64-67, 70-72, 75-77, 82-83, 140-143, 154-156, 336-338, 341-343, 357-359, 600-603, 614-617</p> <p>Teacher Resources:</p> <p><i>Practice</i> 68, 78, 157, 348, 635</p> <p><i>Study Guide</i> 61, 66, 76, 145, 155, 339, 344, 349, 633</p>

STANDARDS	PAGE REFERENCES
3. Compute fluently and make reasonable estimates	
A. Describe or represent mental strategies	
B. Develop and demonstrate fluency	
C. Compute problems	
apply all operations on real numbers MA 5 1.10,3.3 IX.a	Student Edition: 64-67, 70-72, 75-77, 82-83, 140-143, 154-156, 336-338, 341-343, 357-359, 600-603, 614-617 Teacher Resources: <i>Practice</i> 68, 78, 157, 348, 635 <i>Study Guide</i> 61, 66, 76, 145, 155, 339, 344, 349, 633
D. Estimate and justify solutions	
judge the reasonableness of numerical computations and their results MA 1 3.8 V.a	Student Edition: 166 #4, 368 #4, 468 <i>Real World Example</i> 24-25, 119, 161, 191, 206, 480, 670-671 Teacher Wraparound Edition: TT 161 Teacher Resources: <i>Study Guide</i> 21, 115, 688
E. Use proportional reasoning	
solve problems involving proportions MA 1,4 3.3 V.a, VIII.e	Student Edition: 188-191, 198-201, 208 #27, 212-215, 221 #3, 264- 267, 270-273, 356 #60, 404 #65, 444 #50-#51 Teacher Resources: <i>Enrichment</i> 199 <i>Practice</i> 197, 202, 217, 267 <i>Study Guide</i> 195, 200, 215, 265

STANDARDS	PAGE REFERENCES
Algebraic Relationships	
1. Understand patterns, relations and functions	
A. Recognize and extend patterns	
B. Create and analyze patterns	
<p>generalize patterns using explicitly or recursively defined functions</p> <p>MA 4 1.6,3.5</p> <p>VIII.1.b</p>	<p>Student Edition:</p> <p>69 #73, 170 #49, 315 #40, 489</p> <p><i>Investigation</i> 110-111, 494-495</p> <p><i>Real World Example</i> 303</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 507, 637</p> <p><i>Study Guide</i> 493, 503</p>
C. Classify objects and representations	
<p>compare and contrast various forms of representations of patterns</p> <p>MA 4 1.6</p> <p>VIII.a & h</p>	<p>Student Edition:</p> <p>315 #40, 341, 489-490</p> <p><i>Graphing Calculator Exploration</i> 491</p> <p><i>Investigation</i> 110-111, 152-153, 494-495</p> <p>Teacher Wraparound Edition:</p> <p>ML 489</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 343, 507, 592, 637</p> <p><i>Study Guide</i> 503</p>
D. Identify and compare functions	
<p>understand and compare the properties of linear and exponential functions (include intercepts)</p> <p>MA 4 1.6,3.6</p> <p>VIII.b & c</p>	<p>Student Edition:</p> <p>264-267, 268 #14, 269 #33, 284-286, 290-292, 296-298, 310-313, 489-490, 492 #6-#8</p> <p><i>Graphing Calculator Exploration</i> 491</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 269</p> <p><i>Practice</i> 291, 301, 505</p> <p><i>Study Guide</i> 265, 289, 294, 299, 309, 503</p>

STANDARDS	PAGE REFERENCES
E. Describe the effects of parameter changes	
<p>describe the effects of parameter changes on linear functions</p> <p>MA 4 1.6,4.1</p> <p>VIII.i</p>	<p>Student Edition: 285 #3, 316-318, 319 #4-#5, 320 #31, 323 #3</p> <p>Teacher Wraparound Edition: ICE 285, 317, 318; ML 322</p> <p>Teacher Resources: <i>Enrichment 323</i> <i>Practice 321</i> <i>Study Guide 289, 319</i></p>
2. Represent and analyze mathematical situations and structures using algebraic symbols	
A. Represent mathematical situations	
<p>use symbolic algebra to represent and solve problems that involve linear relationships, including absolute value and recursive relationships</p> <p>MA 4,6 1.6,3.1</p> <p>VIII.c & d, X.h</p>	<p>Student Edition: 250-253, 254 #12, 255 #49, 264-267, 284-287, 296-298, 301 #57, 409 #43, 585 #29-#31</p> <p><i>Investigation 110-111</i></p> <p>Teacher Resources: <i>Enrichment 259</i> <i>Practice 257, 267, 291, 301</i> <i>Study Guide 255, 265, 270, 289, 299</i></p>
B. Describe and use mathematical manipulation	
<p>describe and use algebraic manipulations, including factoring and rules of integer exponents</p> <p>MA 4 3.1,4.1</p> <p>VIII.a & d</p>	<p>Student Edition: 336-338, 428-431, 433 #55-#56, 434-437, 439 #52, 440-442, 445-447, 644-647, 650-653, 656-659, 662-665</p> <p>Teacher Resources: <i>Enrichment 452, 672, 677</i> <i>Practice 341, 440, 445, 450, 455, 670, 675</i> <i>Study Guide 339, 438, 443, 448, 453, 668, 673</i></p>

STANDARDS	PAGE REFERENCES
C. Utilize equivalent forms	
<p>use and solve equivalent forms of equations and inequalities (linear)</p> <p>MA 4 1.6,3.4</p> <p>VIII.d & e</p>	<p>Student Edition:</p> <p>122-123, 125 #4, 128-130, 165-167, 176-177, 398 #78, 509-510, 514-516, 530-532</p> <p><i>Hands-On Algebra</i> 511</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 532, 537</p> <p><i>Practice</i> 122, 167, 177, 530, 535, 545, 550</p> <p><i>Study Guide</i> 120, 165, 175, 528, 533, 543, 548</p>
D. Utilize systems	
<p>use and solve systems of linear equations with 2 variables</p> <p>MA 4 1.6</p> <p>VIII.b & d</p>	<p>Student Edition:</p> <p>550-552, 553 #9-#20, 554-557, 559 #28, 560-563, 564 #4-#9, 565 #29, 566-569, 572-575</p> <p><i>Investigation</i> 578-579</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 577</p> <p><i>Practice</i> 575, 585, 590</p> <p><i>Study Guide</i> 573, 583, 588</p>
3. Use mathematical models to represent and understand quantitative relationships	
A. Use mathematical models	
<p>identify quantitative relationships and determine the type(s) of functions that might model the situation to solve the problem</p> <p>MA 4 1.6,3.6</p> <p>VIII.c</p>	<p>Student Edition:</p> <p>284-286, 289 #28, 294 #38, 299 #13, 300 #47, 302-305, 306 #9-#10</p> <p><i>Real World Example</i> 298</p> <p>Teacher Wraparound Edition:</p> <p>FA 300; RA 286</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 293, 298, 308</p> <p><i>Practice</i> 291, 301, 306</p> <p><i>Study Guide</i> 289, 299, 304</p>

STANDARDS	PAGE REFERENCES
4. Analyze change in various contexts	
A. Analyze change	
<p>analyze linear functions by investigating rates of change and intercepts</p> <p>MA 4 1.6,4.1</p> <p>VIII.a & c</p>	<p>Student Edition:</p> <p>284-286, 288 #13-#18, 289 #28, 296-298, 299 #13, 300 #46, 301 #49-#50</p> <p>Teacher Wraparound Edition:</p> <p>FA 300; ICE 297, 298</p> <p>Teacher Resources:</p> <p><i>Enrichment 293</i></p> <p><i>Practice 291</i></p> <p><i>Study Guide 289, 299</i></p>
Geometric and Spatial Relationships	
1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships	
A. Describe and use geometric relationships	
<p>solve problems involving angle relationships (supplementary, complementary angles) and Pythagorean Theorem</p> <p>MA 2 1.6</p> <p>VI.c</p>	<p>Student Edition:</p> <p>179 #34, 255 #41, 366-368, 369 #6-#9, 370 #34, 371 #36, 605 #58, 606-608, 619 #40</p> <p><i>Investigation 372-373</i></p> <p>Teacher Resources:</p> <p><i>Enrichment 373, 632</i></p> <p><i>Practice 371, 630</i></p> <p><i>Study Guide 369, 628</i></p>
B. Apply geometric relationships	
<p>apply geometric properties and relationships, such as similarity, to solve multi-step problems in 2 dimensions</p> <p>MA 2 3.6</p> <p>VI.c</p>	<p>Student Edition:</p> <p>63 #37, 77 #9, 79 #49, 174 #35, 177 #3, 261 #51, 366-368, 370 #34, 610 #28</p> <p><i>Real World Example 460</i></p> <p>Teacher Resources:</p> <p><i>Enrichment 373</i></p> <p><i>Practice 371</i></p> <p><i>Study Guide 369</i></p>

STANDARDS	PAGE REFERENCES
C. Compose and decompose shapes	
2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems	
A. Use coordinate systems	
<p>solve problems related to 2-dimensional objects by finding the distance on a Cartesian plane</p> <p>MA 2 3.2</p> <p>VI.f</p>	<p>Student Edition:</p> <p>29 #17, 37 #25, 195 #1, 197 #16, 606-608, 609 #9, 610 #30, 654 #32</p> <p><i>Hands-On Algebra</i> 194</p> <p><i>Investigation</i> 612-613</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 632</p> <p><i>Practice</i> 630</p> <p><i>Study Guide</i> 628</p>
3. Apply transformations and use symmetry to analyze mathematical situations	
A. Use transformations on objects	
<p>represent translations, reflections, rotations, and dilations of objects in the coordinate plane</p> <p>MA 2 1.10</p> <p>VI.b</p>	<p>Student Edition:</p> <p>69 #61, 77 #9, 78 #13, 79 #49, 88 #62</p> <p>Teacher Wraparound Edition:</p> <p>5MC 82; ICE 77</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 323</p>
B. Use transformations on functions	
<p>translate and reflect linear functions</p> <p>MA 4 3.1</p> <p>VIII,I</p>	<p>Student Edition:</p> <p>323 #3</p>
C. Use symmetry	
4. Use visualization, spatial reasoning and geometric modeling to solve problems	
A. Recognize and draw three-dimensional representations	
<p>draw and use vertex-edge graphs or networks to find optimal solutions</p> <p>MA 6 3.4</p> <p>X.a</p>	<p>See Glencoe's <i>Geometry: Concepts and Applications</i> © 2004.</p>

STANDARDS	PAGE REFERENCES
B. Draw and use visual models	
<p>draw or use visual models to represent and solve problems</p> <p>MA 2 3.1</p> <p>VI.b & i</p>	<p>Student Edition:</p> <p>197 #16, 366, 371 #35</p> <p><i>Hands-On Algebra</i> 194</p> <p><i>Investigation</i> 110-111, 372-373, 612-613</p> <p><i>Real World Example</i> 460</p> <p>Teacher Wraparound Edition:</p> <p>OEA 295, 371</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 199, 602, 637</p> <p><i>Practice</i> 202</p> <p><i>Study Guide</i> 200</p>
Measurement	
1. Understand measurable attributes of objects and the units, systems and processes of measurement	
A. Determine unit of measurement	
<p>identify and justify appropriate units of measure for velocity</p> <p>MA 1,2 3.1,4.1</p> <p>V.a, VI.d</p>	<p>Student Edition:</p> <p>164 #39, 190, 577 #34, 585 #26, 595 #25, 654 #32</p> <p><i>Real World Example</i> 191, 670</p> <p>Teacher Wraparound Edition:</p> <p>ICE 670; MTL 644</p>
B. Identify equivalent measures	
C. Tell and use units of time	
D. Count and compute money	

STANDARDS	PAGE REFERENCES
<p>2. Apply appropriate techniques, tools and formulas to determine measurements</p>	
<p>A. Use standard or non-standard measurement</p>	
<p>B. Use angle measurement</p>	
<p>solve problems of angle measure, including those involving triangles or other polygons MA 2 3.1,3.4 VI.i</p>	<p>Student Edition: 179 #34, 249 #39, 255 #41, 517 #35, 547 #2-#3 <i>Real World Example</i> 200-201 Teacher Resources: <i>Enrichment</i> 557</p>
<p>C. Apply geometric measurements</p>	
<p>determine the surface area and volume of geometric figures, including cones, spheres, and cylinders MA 2 1.10,3.4 VI. i</p>	<p>Student Edition: 85 #56, 402 #7, 403 #20, 439 #50, 463 #48, 654 #30 <i>Investigation</i> 410-411 <i>Real World Example</i> 15, 442 Teacher Wraparound Edition: ICE 402, 442 Teacher Resources: <i>Enrichment</i> 397, 447, 457, 492</p>
<p>D. Analyze precision</p>	
<p>analyze effects of computation on precision MA 2 1.7,3.8 VI.k</p>	<p>Student Edition: 533 #14, 534 #44 <i>Real World Example</i> 532 Teacher Wraparound Edition: ICE 532 Teacher Resources: <i>Enrichment</i> 547</p>

STANDARDS	PAGE REFERENCES
E. Use relationships within a measurement system	
use unit analysis to solve problems involving rates MA 4 3.1 VIII.b	Student Edition: 29 #17, 190, 529 #71, 577 #34, 585 #26, 595 #25, 654 #32 <i>Real World Example</i> 191, 285, 670-671 Teacher Resources: <i>Practice</i> 202 <i>Study Guide</i> 200
Data and Probability	
1. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them	
A. Formulate questions	
formulate questions, design studies and collect data about a characteristic MA 3 1.2 VII.a	Student Edition: 24-26, 27 #7, 28 #14, 29 #18, 32-34, 36 #21, 37 #22 <i>Investigation</i> 30-31 Teacher Wraparound Edition: ICE 33; ML 32 Teacher Resources: <i>Enrichment</i> 25, 30 <i>Practice</i> 23, 28 <i>Study Guide</i> 21, 26
B. Classify and organize data	
C. Represent and interpret data	
select, create and use appropriate graphical representation of data MA 6 1.8, 3.6 X.b	Student Edition: 38-41, 42 #7-#10, 43 #15, 185 #4, 208 #27, 361 #54, 472 #24 <i>Real World Example</i> 200-201, 215 Teacher Wraparound Edition: ICE 40 Teacher Resources: <i>Enrichment</i> 60, 249, 368, 487 <i>Practice</i> 33, 58, 247, 485 <i>Study Guide</i> 31, 56, 245, 483

STANDARDS	PAGE REFERENCES
2. Select and use appropriate statistical methods to analyze data	
A. Describe and analyze data	
apply statistical concepts to solve problems MA 3 1.10,3.4 VII.g	Student Edition: 40-41, 42 #11, 43 #19-#22, 104-107, 121 #42, 145 #57, 243 #33, 281 #10 <i>Investigation</i> 210-211 <i>Real World Example</i> 215 Teacher Resources: <i>Enrichment</i> 35, 108, 154 <i>Practice</i> 33, 107, 152 <i>Study Guide</i> 31, 105, 150
B. Compare data representations	
given one-variable quantitative data, display the distribution and describe its shape MA 3 1.8 VII.d & I	Student Edition: 106 #4, 108 #24-#25, 302-303 <i>Real World Example</i> 107 Teacher Wraparound Edition: ICE 303, 304 Teacher Resources: <i>Enrichment</i> 108, 308 <i>Practice</i> 306 <i>Study Guide</i> 304
C. Represent data algebraically	
given a scatter plot, determine an equation for a line of best fit MA 3 1.6 VII.b	Student Edition: 295 #39, 302-304 <i>Investigation</i> 308-309 Teacher Wraparound Edition: ICE 303 Teacher Resources: <i>Enrichment</i> 308

STANDARDS	PAGE REFERENCES
3. Develop and evaluate inferences and predictions that are based on data	
A. Develop and evaluate inferences	
<p>make conjectures about possible relationships between 2 characteristics of a sample on the basis of scatter plots of the data and approximate lines of fit</p>	<p>Student Edition: 302-304, 305 #4, 306 #9-#10, 307 #17, 623 #46 <i>Investigation</i> 308-309</p> <p>Teacher Wraparound Edition: ICE 303, 304</p> <p>Teacher Resources: <i>Enrichment</i> 308 <i>Practice</i> 306 <i>Study Guide</i> 304</p>
B. Analyze basic statistical techniques	
4. Understand and apply basic concepts of probability	
A. Apply basic concepts of probability	
<p>construct sample spaces and distributions</p> <p>MA 3 3.1 VII.f</p>	<p>Student Edition: 146-147, 149 #10, 150 #19, 151 #23, 158 #51, 181 #19, 224 <i>Investigation</i> 152-153 <i>Real World Example</i> 148</p> <p>Teacher Wraparound Edition: ICE 147</p> <p>Teacher Resources: <i>Enrichment</i> 154 <i>Practice</i> 152 <i>Study Guide</i> 150</p>
B. Use and describe compound events	

STANDARDS	PAGE REFERENCES
GRADE 10	
Number and Operations	
1. Understand numbers, ways of representing numbers, relationships among numbers and number systems	
A. Read, write and compare numbers	
B. Represent and use rational numbers	
<p>use real numbers to solve problems</p> <p>MA 1 3.4</p> <p>V.1.a</p>	<p>Student Edition:</p> <p>600-603, 604 #55, 605 #57, 606-608, 609 #9, 610 #30, 614-617</p> <p><i>Investigation</i> 612-613</p> <p>Teacher Wraparound Edition:</p> <p>ICE 602, 603</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 627</p> <p><i>Practice</i> 625</p> <p><i>Study Guide</i> 623</p>
C. Compose and decompose numbers	
<p>use a variety of representations to demonstrate an understanding of very large and very small numbers</p> <p>MA 5 3.6</p> <p>IX.a & d</p>	<p>Student Edition:</p> <p>345 #47, 348 #1, 349 #5, 352-354, 355 #18, 356 #49, 425 #67, 539 #41</p> <p>Teacher Wraparound Edition:</p> <p>ICE 353, 354</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 358</p> <p><i>Practice</i> 356</p> <p><i>Study Guide</i> 354</p>
D. Classify and describe numeric relationships	

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<p>2. Understand meanings of operations and how they relate to one another</p>	
<p>A. Represent operations</p>	
<p>B. Describe effects of operations</p>	
<p>C. Apply properties of operations</p>	
<p>apply properties of exponents to simplify expressions or solve equations MA 4 1.6,1.10 VIII.c & d</p>	<p>Student Edition: 336-338, 339 #10-#12, 340 #31-#38, 341-343, 347-349, 350 #4-#5, 352-353</p> <p>Teacher Wraparound Edition: ICE 342, 343; TT 338</p> <p>Teacher Resources: <i>Enrichment</i> 343, 348, 353, 358 <i>Practice</i> 341, 346, 352, 356 <i>Study Guide</i> 339, 344, 349, 354</p>
<p>D. Apply operations on real and complex numbers</p>	
<p>apply operations to real numbers, using mental computation or paper-and-pencil calculations for simple cases and technology for more complicated cases MA 1,4,5 1.4,3.4 V.a, VIII.d, IX.6</p>	<p>Student Edition: 64-67, 70-72, 75-77, 82-83, 140-143, 154-156, 336-338, 341-343, 357-359, 600-603, 614-617</p> <p>Teacher Resources: <i>Practice</i> 73, 78, 157, 344, 635 <i>Study Guide</i> 61, 66, 76, 140, 155, 339, 344, 349, 633</p>

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D. Estimate and justify solutions	
judge the reasonableness of numerical computations and their results MA 1 3.8 V.a	Student Edition: 166 #4, 368 #4, 468 <i>Real World Example</i> 24-25, 119, 161, 191, 206, 480, 670-671 Teacher Wraparound Edition: TT 161 Teacher Resources: <i>Study Guide</i> 21, 115, 688
E. Use proportional reasoning	
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generalize patterns using explicitly or recursively defined functions MA 4 1.6,3.5 VIII.1.b	Student Edition: 69 #73, 170 #49, 315 #40, 489 <i>Investigation</i> 110-111, 494-495 <i>Real World Example</i> 303 Teacher Resources: <i>Enrichment</i> 507, 637 <i>Study Guide</i> 493, 503
C. Classify objects and representations	
compare and contrast various forms of representations of patterns MA 4 1.6 VIII.a & h	Student Edition: 315 #40, 341, 489-490 <i>Graphing Calculator Exploration</i> 491 <i>Investigation</i> 110-111, 152-153, 494-495 Teacher Wraparound Edition: ML 489 Teacher Resources: <i>Enrichment</i> 343, 507, 592, 637 <i>Study Guide</i> 503
D. Identify and compare functions	
understand and compare the properties of linear, exponential and quadratic functions (include domain and range) MA 4 1.6,3.6 VIII.b & c	Student Edition: 264-267, 284-286, 290-292, 310-313, 458-461, 463 #43, 478-480, 489-490, 492 #6-#8 <i>Graphing Calculator Exploration</i> 491 Teacher Resources: <i>Enrichment</i> 269, 293, 313, 477, 507 <i>Practice</i> 267, 291, 311, 475, 505 <i>Study Guide</i> 265, 289, 309, 473, 503

STANDARDS	PAGE REFERENCES
E. Describe the effects of parameter changes	
<p>describe the effects of parameter changes on quadratic and exponential functions</p> <p>MA 4 1.6,4.1</p> <p>VIII.i</p>	<p>Student Edition:</p> <p>464-465, 466 #5-#8, 467 #26, 473 #28-#30, 489-491, 493 #26</p> <p><i>Investigation</i> 494-495</p> <p>Teacher Wraparound Edition:</p> <p>ICE 464, 465; OEA 493</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 482, 507</p> <p><i>Practice</i> 480, 505</p> <p><i>Study Guide</i> 478, 503</p>
2. Represent and analyze mathematical situations and structures using algebraic symbols	
A. Represent mathematical situations	
<p>use symbolic algebra to represent and solve problems that involve quadratic relationships, including recursive relationships</p> <p>MA 4,6 1.6,3.1</p> <p>VIII.c & d, X.h</p>	<p>Student Edition:</p> <p>474-476, 477 #32, 478-480, 481 #23-#34, 482 #38-#41, 483-485, 486 #11-#25</p> <p><i>Graphing Calculator Exploration</i> 471</p> <p><i>Investigation</i> 494-495</p> <p>Teacher Wraparound Edition:</p> <p>ICE 475</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 502</p> <p><i>Practice</i> 490, 500</p> <p><i>Study Guide</i> 488, 498</p>
B. Describe and use mathematical manipulation	
<p>describe and use algebraic manipulations, including factoring and rules of integer exponents</p> <p>MA 4 3.1,4.1</p> <p>VIII.a & d</p>	<p>Student Edition:</p> <p>336-338, 428-431, 434-437, 440-442, 445-447, 474-476, 478-480, 644-647, 650-653, 656-659, 662-665</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 452, 672, 677</p> <p><i>Practice</i> 341, 440, 445, 450, 455, 670, 675</p> <p><i>Study Guide</i> 339, 438, 443, 448, 453, 668, 673</p>

STANDARDS	PAGE REFERENCES
C. Utilize equivalent forms	
<p>use and solve equivalent forms of equations and inequalities (piece-wise and quadratic)</p> <p>MA 4 1.6,3.4</p> <p>VIII.d</p>	<p>Student Edition: 474-476, 477 #32, 478-480, 481 #10-#12, 483-485, 486 #26, 519-521, 524-527</p> <p>Teacher Wraparound Edition: ICE 485; OEA 482</p> <p>Teacher Resources: <i>Practice</i> 490, 495, 500, 540, 545 <i>Study Guide</i> 488, 493, 498, 538, 543</p>
D. Utilize systems	
<p>use and solve systems of linear equations or inequalities with 2 variables</p> <p>MA 4 1.6</p> <p>VIII.b & d</p>	<p>Student Edition: 550-552, 553 #9-#20, 554-557, 559 #28, 560-563, 564 #4-#9, 565 #29, 566-569, 572-575</p> <p><i>Investigation</i> 578-579</p> <p>Teacher Resources: <i>Enrichment</i> 577 <i>Practice</i> 575, 580, 585, 590, 595 <i>Study Guide</i> 573, 578, 583, 588, 593</p>
3. Use mathematical models to represent and understand quantitative relationships	
A. Use mathematical models	
<p>identify quantitative relationships and determine the type(s) of functions that might model the situation to solve the problem</p> <p>MA 4 1.6,3.6</p> <p>VIII.c</p>	<p>Student Edition: 284-286, 289 #28, 294 #38, 299 #13, 300 #47, 302-305, 306 #9-#10</p> <p><i>Real World Example</i> 298</p> <p>Teacher Wraparound Edition: FA 300; RA 286</p> <p>Teacher Resources: <i>Enrichment</i> 293 <i>Practice</i> 291 <i>Study Guide</i> 289, 299</p>

STANDARDS	PAGE REFERENCES
4. Analyze change in various contexts	
A. Analyze change	
<p>analyze quadratic functions by investigating rates of change, intercepts and zeros</p> <p>MA 4 1.6,4.1</p> <p>VIII.a & c</p>	<p>Student Edition:</p> <p>458-461, 463 #44, 464-465, 468-470, 472 #7-#9, 474-476, 477 #32</p> <p><i>Graphing Calculator Exploration</i> 471</p> <p>Teacher Wraparound Edition:</p> <p>TT 475</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 477, 482</p> <p><i>Practice</i> 475, 485, 492</p> <p><i>Study Guide</i> 473, 478, 483, 488</p>
Geometric and Spatial Relationships	
1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships	
A. Describe and use geometric relationships	
<p>use inductive and deductive reasoning to establish the validity of geometric conjectures, proved theorems and critique arguments made by others</p> <p>MA 2 3.5</p> <p>VI.d</p>	<p>Student Edition:</p> <p>177 #3, 366-369, 370 #34, 606-609</p> <p><i>Investigation</i> 30-31, 372-373, 540-541, 612-613</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 373, 632</p> <p><i>Practice</i> 371, 630</p> <p><i>Study Guide</i> 369, 628</p>
B. Apply geometric relationships	
<p>apply relationships among surface areas and among volumes of similar objects</p> <p>MA 2 3.6</p> <p>VI.c & i</p>	<p>Student Edition:</p> <p>402 #7, 403 #20, 439 #50, 463 #48, 654 #30, 678 #39</p> <p>Also see Glencoe's <i>Geometry: Concepts and Applications</i> © 2004.</p>
C. Compose and decompose shapes	

STANDARDS	PAGE REFERENCES
<p>2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems</p>	
<p>A. Use coordinate systems</p>	
<p>make conjectures and solve problems involving 2-dimensional objects represented with Cartesian coordinates</p> <p>MA 2 3.6,4.1</p> <p>VI.f</p>	<p>Student Edition: 58, 288 #12, 289 #28, 371 #35, 606-608, 609 #9 <i>Investigation</i> 612-613 <i>Math In the Workplace</i> 488 <i>Real World Example</i> 60</p> <p>Teacher Wraparound Edition: ICE 607</p> <p>Teacher Resources: <i>Enrichment</i> 60, 199, 224, 492, 497, 632 <i>Study Guide</i> 628</p>
<p>3. Apply transformations and use symmetry to analyze mathematical situations</p>	
<p>A. Use transformations on objects</p>	
<p>use and apply constructions to represent translations, reflections, rotations, and dilations of objects</p> <p>MA 2 1.10</p> <p>VI.b</p>	<p>Student Edition: 69 #61, 77 #9, 78 #13, 79 #49, 88 #62</p> <p>Teacher Wraparound Edition: ICE 77</p> <p>Teacher Resources: <i>Enrichment</i> 323</p>
<p>B. Use transformations on functions</p>	
<p>translate, dilate and reflect quadratic and exponential functions</p> <p>MA 4 3.1</p> <p>VIII.i</p>	<p>Student Edition: 464 #2, 465 #3-#5, 466 #6-#8, 467 #25-#26, 473 #29-#30, 497 #19-#20</p> <p>Teacher Wraparound Edition: ICE 465</p> <p>Teacher Resources: <i>Enrichment</i> 482 <i>Practice</i> 480 <i>Study Guide</i> 478</p>

STANDARDS	PAGE REFERENCES
C. Use symmetry	
identify types of symmetries of 2- and 3-dimensional figures MA 2 1.6,1.10 VI.f	Student Edition: 458-460, 461 #11-#14, 462 #25-#36, 468-470 Teacher Wraparound Edition: ICE 459 Teacher Resources: <i>Study Guide</i> 473, 483
4. Use visualization, spatial reasoning and geometric modeling to solve problems	
A. Recognize and draw three-dimensional representations	
draw representations of 3-dimensional geometric objects using a variety of tools MA 2 1.4 VI.a	Student Edition: 402 #7, 403 #20, 439 #50 Teacher Resources: <i>Enrichment</i> 492
B. Draw and use visual models	
draw or use visual models to represent and solve problems MA 2 3.1 VI.b & i	Student Edition: 194-195 <i>Hands-On Algebra</i> 25, 141, 224, 489, 511 <i>Investigation</i> 110-111, 152-153, 494-495, 540-541 Teacher Resources: <i>Enrichment</i> 199, 602, 637 <i>Practice</i> 202 <i>Study Guide</i> 200
Measurement	
1. Understand measurable attributes of objects and the units, systems and processes of measurement	
A. Determine unit of measurement	
B. Identify equivalent measures	
C. Tell and use units of time	
D. Count and compute money	

STANDARDS	PAGE REFERENCES
2. Apply appropriate techniques, tools and formulas to determine measurements	
----- A. Use standard or non-standard measurement	
----- B. Use angle measurement	
solve problems of angle measure of parallel lines cut by a transversal MA 2 3.1,3.4 VI.f & i	Student Edition: 547 #8
C. Apply geometric measurements	
determine the surface area and volume of geometric figures, including cones, spheres, and cylinders MA 2 1.10,3.4 VI.i	Student Edition: 85 #56, 402 #6, 403 #20, 439 #50, 463 #48, 654 #30 <i>Real World Example 15, 442</i> Teacher Wraparound Edition: ICE 402, 442 Teacher Resources: <i>Enrichment 397, 447, 457, 492</i>
D. Analyze precision	
analyze effects of computation on precision MA 2 1.7, 3.8 VI.k	Student Edition: 533 #14, 534 #44 <i>Real World Example 532</i> Teacher Wraparound Edition: ICE 532 Teacher Resources: <i>Enrichment 547</i>
E. Use relationships within a measurement system	

STANDARDS	PAGE REFERENCES
Data and Probability	
1. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them	
A. Formulate questions	
<p>formulate questions, design studies and collect data about a characteristic</p> <p>MA 3 1.2</p> <p>VII.a</p>	<p>Student Edition: 24-26, 27 #7, 28 #14, 29 #18, 32-34, 36 #21, 37 #22</p> <p><i>Investigation</i> 30-31</p> <p>Teacher Wraparound Edition: ICE 33; ML 32</p> <p>Teacher Resources: <i>Enrichment</i> 25, 30 <i>Practice</i> 23, 28 <i>Study Guide</i> 21, 26</p>
B. Classify and organize data	
C. Represent and interpret data	
<p>select, create and use appropriate graphical representation of data</p> <p>MA 6 1.8,3.6</p> <p>X.b</p>	<p>Student Edition: 38-41, 42 #7-#10, 43 #15, 185 #4, 208 #27, 361 #54, 472 #24</p> <p><i>Real World Example</i> 200-201, 215</p> <p>Teacher Wraparound Edition: ICE 40</p> <p>Teacher Resources: <i>Enrichment</i> 60, 249, 368, 487 <i>Practice</i> 33, 58, 247, 485 <i>Study Guide</i> 31, 56, 245, 483</p>

STANDARDS	PAGE REFERENCES
2. Select and use appropriate statistical methods to analyze data	
A. Describe and analyze data	
<p>apply statistical concepts to solve problems and distinguish between a statistic and a parameter</p> <p>MA 3 1.10,3.4</p> <p>VII.g</p>	<p>Student Edition:</p> <p>40-41, 42 #11, 43 #19-#22, 104-107, 121 #42, 145 #57, 243 #33, 281 #10</p> <p><i>Investigation</i> 210-211</p> <p><i>Real World Example</i> 215</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 35, 108, 154</p> <p><i>Practice</i> 33, 107, 152</p> <p><i>Study Guide</i> 31, 105, 150</p>
B. Compare data representations	
<p>given one-variable quantitative data, display the distribution and describe its shape</p> <p>MA 3 1.8</p> <p>VII.d & i</p>	<p>Student Edition:</p> <p>106 #4, 107 #5, 108 #24-#25, 302-303</p> <p>Teacher Wraparound Edition:</p> <p><i>ICE</i> 303, 304</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 108, 308</p> <p><i>Practice</i> 306</p> <p><i>Study Guide</i> 304</p>
C. Represent data algebraically	
<p>display and analyze bivariate data where one variable is categorical and the other is numerical</p> <p>MA 3 1.6</p> <p>VII.e</p>	<p>Student Edition:</p> <p>38-41, 101 #4, 238-241, 289 #29-#30, 307 #16-#17, 623 #46</p> <p><i>Investigation</i> 308-309</p> <p><i>Problem-Solving Strategy Workshop</i> 754-757</p> <p><i>Real World Example</i> 101, 304</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 25, 35</p> <p><i>Practice</i> 33</p> <p><i>Study Guide</i> 21, 31, 245, 304</p>

STANDARDS	PAGE REFERENCES
3. Develop and evaluate inferences and predictions that are based on data	
A. Develop and evaluate inferences	
<p>describe how sample statistics reflect the values of population parameters and use sampling distributions as the basis for informal inference</p> <p>MA 3 3.5</p> <p>VII.a</p>	<p>Student Edition: 32-34, 35 #9, 37 #22, 104-106 <i>Real World Example</i> 39</p> <p>Teacher Wraparound Edition: ICE 33, 34, 39</p> <p>Teacher Resources: <i>Enrichment</i> 108 <i>Practice</i> 28, 107 <i>Study Guide</i> 26, 105</p>
B. Analyze basic statistical techniques	
4. Understand and apply basic concepts of probability	
A. Apply basic concepts of probability	
<p>describe the concepts of sample space and probability distribution</p> <p>MA 3 4.1</p> <p>VII.e</p>	<p>Student Edition: 146-147, 149 #10, 150 #19, 151 #23, 158 #51, 181 #19, 224 <i>Real World Example</i> 148</p> <p>Teacher Wraparound Edition: ICE 147</p> <p>Teacher Resources: <i>Enrichment</i> 154 <i>Practice</i> 152 <i>Study Guide</i> 150</p>

STANDARDS	PAGE REFERENCES
B. Use and describe compound events	
<p>use and describe the concepts of conditional probability and independent events</p> <p>MA 6 1.10,4.1</p> <p>X.d</p>	<p>Student Edition:</p> <p>224-227, 228 #5-#8, 229 #19</p> <p><i>Real World Example</i> 406-407</p> <p>Teacher Wraparound Edition:</p> <p>ICE 227</p> <p>Teacher Resources:</p> <p><i>Enrichment</i> 229</p> <p><i>Practice</i> 227</p> <p><i>Study Guide</i> 225</p>