



Algebra 2

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STANDARDS	PAGE REFERENCES
<p>Standards 4.6- 4.15</p> <p>All students will develop an understanding of algebraic concepts and processes and will use them to represent and analyze relationships among variable quantities and to solve problems.</p> <p>MODE: Through the investigation of meaningful problems, individually or in cooperative groups while using decision making, risk taking, perseverance, appropriate assessment and technology the student will:</p>	
<ul style="list-style-type: none"> collect and organize data in graphs. 	<p>Student Edition: 60 Example 2, 63 #43, #47, #51, 87-89, 105 #47</p> <p>Teacher Wraparound Edition: AE 60, 87; PA 91</p>
<ul style="list-style-type: none"> graph linear equations. 	<p>Student Edition: 68 Example 4, #8-#9, 70 #51, #55, 71-72 Example 1, 73 Example 3, 74 Example 4 #4-#5, 75 #9-#12, #19-#24, #30-#37 <i>Get Ready</i> 66 <i>Graphing Calculator Lab</i> 78, 92-94</p> <p>Teacher Wraparound Edition: AE 68, 72-74</p>
<ul style="list-style-type: none"> write linear equations in slope-intercept and standard form. 	<p>Student Edition: 67 Example 3, 68 #5-#7, 69 #22-#27, 79-84, 91 #23-#24, 465 <i>Study Guide and Review</i> 107 5-5, 108 2-4</p> <p>Teacher Wraparound Edition: AE 80, 81</p>

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<ul style="list-style-type: none"> translate functions. 	<p>Student Edition: 287, 288-289 Example 3, 829-836 <i>Get Ready</i> 286 <i>Graphing Calculator Lab</i> 284-285, 829</p> <p>Teacher Wraparound Edition: AE 287, 288; FM 834</p>
<ul style="list-style-type: none"> identify and graph conic sections. 	<p>Student Edition: 567-573, 574-579, 581-588, 590-597, 598-602 <i>Algebra Lab</i> 280</p> <p>Teacher Wraparound Edition: AE 569, 570, 571, 576, 585, 593, 594; I 568; PA 573, 597</p>
<ul style="list-style-type: none"> add, multiply, and divide radical expressions. 	<p>Student Edition: 402-406, 422-427, 408-414, 421 #67-#68 <i>Graphing Calculator Lab</i> 428-429</p> <p>Teacher Wraparound Edition: A 406; AE 403, 411, 423; PA 427</p>
<ul style="list-style-type: none"> solve radical equations. 	<p>Student Edition: 422-427, 465 #66 <i>Graphing Calculator Lab</i> 428-429 <i>Practice Test</i> 435 #8-#13 <i>Study Guide and Review</i> 434</p> <p>Teacher Wraparound Edition: AE 423, 424; PA 427</p>
<ul style="list-style-type: none"> define, add, subtract, multiply and divide complex numbers. 	<p>Student Edition: 261-266, 275 #68-#70, 278-279 Example 4, 362-363, 365-366 <i>Study Guide and Review</i> 304 5-4</p> <p>Teacher Wraparound Edition: AE 262, 263, 364; FM 263</p>
<ul style="list-style-type: none"> simplify expressions with rational exponents. 	<p>Student Edition: 417 Example 4, 418 Example 5, 419 #10-#15, 420 #35-#50 <i>Practice Test</i> 435 #20-#21, #23 <i>Study Guide and Review</i> 433 7-6</p> <p>Teacher Wraparound Edition: AE 417, 418</p>

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<ul style="list-style-type: none"> solve equations with rational exponents. 	<p>Student Edition: 501-505 <i>Graphing Calculator Lab</i> 507-508</p> <p>Teacher Wraparound Edition: AE 501, 502; PA 506</p>
<ul style="list-style-type: none"> solve absolute value equations and inequalities. 	<p>Student Edition: 28-31, 33-38, 41-47, 103-104</p> <p>Teacher Wraparound Edition: AE 28, 29, 34, 35, 44</p>
<ul style="list-style-type: none"> graph linear inequalities. 	<p>Student Edition: 101 #59-#60, 102-105 <i>Study Guide and Review</i> 110</p> <p>Teacher Wraparound Edition: AE 103; PE 105</p>
<ul style="list-style-type: none"> graph systems of inequalities. 	<p>Student Edition: 130-135, 138-143, 152 #36-#38 <i>Graphing Calculator Lab</i> 136 <i>Study Guide and Review</i> 155</p> <p>Teacher Wraparound Edition: AE 131, 132, 139; FM 131</p>
<ul style="list-style-type: none"> graph quadratic equations and inequalities. 	<p>Student Edition: 246-251, 258 #56-#58, 280, 294-301 <i>Graphing Calculator Lab</i> 252 <i>Study Guide and Review</i> 303</p> <p>Teacher Wraparound Edition: AE 247, 295, 296; PA 251</p>
<ul style="list-style-type: none"> solve systems of equations using elimination, substitution, and graphing. 	<p>Student Edition: 125-128, 135 #42-#45, 146-151, 201 <i>Study Guide and Review</i> 156</p> <p>Teacher Wraparound Edition: AE 125, 126</p>
<ul style="list-style-type: none"> sketch polynomial function. 	<p>Student Edition: 333-334, 337 #50, #55, 339-341, 343-345 <i>Graphing Calculator Lab</i> 342, 346-347</p> <p>Teacher Wraparound Edition: AE 340, 341-342; EC 334; GF 333; PA 345</p>

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<ul style="list-style-type: none"> find minimum and maximum values of functions. 	<p>Student Edition: 238-243, 258 #59, 340-345, 355 #63-#64 <i>Graphing Calculator Lab</i> 342 <i>Study Guide and Review</i> 376 6-5</p> <p>Teacher Wraparound Edition: AE 239, 341, 342</p>
<ul style="list-style-type: none"> examine the slope of a curve to determine if the slope at a given point is positive, negative, zero, or undefined. 	<p>Student Edition: 72-73, 76 #53 <i>Study Tip</i> 79</p> <p>Teacher Wraparound Edition: I 73</p>
<ul style="list-style-type: none"> determine if the slope of a curve is increasing or decreasing in a given interval. 	<p>Student Edition: 72 Example 2, 74 #6-#8, 75 #25-#29</p> <p>Teacher Wraparound Edition: RC 72</p>
<ul style="list-style-type: none"> find inverses of functions. 	<p>Student Edition: 392-396, 401 #36-#38, 509, 537 <i>Algebra Lab</i> 394 <i>Study Guide and Review</i> 431</p> <p>Teacher Wraparound Edition: AE 392, 393; I 393</p>
<ul style="list-style-type: none"> graph inverse functions and relate to reflections over the line $y=x$. 	<p>Student Edition: 392-395 <i>Study Guide and Review</i> 431</p> <p>Teacher Wraparound Edition: AE 392; DI 392</p>
<ul style="list-style-type: none"> apply basic translations, dilations, and vertical reflections to graphs of quadratic functions. 	<p>Student Edition: 286-292, 397 <i>Graphing Calculator Lab</i> 284-285</p> <p>Teacher Wraparound Edition: AE 287; FM 287; T 284</p>
<ul style="list-style-type: none"> develop quadratic models to represent growth and change in the natural world. 	<p>Student Edition: 248 Example 5, 250 #30-#31, #44-#45, 257 #47-#49, 272 #5-#7 <i>Get Ready</i> 276 <i>Graphing Calculator Lab</i> 252, 293</p> <p>Teacher Wraparound Edition: AE 248</p>

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<ul style="list-style-type: none"> perform operations and composition of functions. 	<p>Student Edition: 384-390, 396 #47-#49, 511, 660-662 <i>Study Guide and Review</i> 431 7-1</p> <p>Teacher Wraparound Edition: AE 385, 386, 387</p>
<ul style="list-style-type: none"> solve quadratic equations by factoring, completing the square and the quadratic formula. 	<p>Student Edition: 255-258, 271-274, 277-282 <i>Study Guide and Review</i> 304 5-3, 305</p> <p>Teacher Wraparound Edition: AE 255, 271, 277; FM 255; PA 273</p>
<ul style="list-style-type: none"> understand and use the discriminant. 	<p>Student Edition: 279-283, 292 #61-#63 <i>Study Guide and Review</i> 305 5-6</p> <p>Teacher Wraparound Edition: AE 280; FM 279; PA 280; RD 279</p>
<ul style="list-style-type: none"> find zeros of polynomials. 	<p>Student Edition: 334, 335 #9-#11, 336 #28-#33, 339, 343 #3-#4, 362-368, 369-373</p> <p>Teacher Wraparound Edition: AE 334, 340; EC 334; FM 363</p>
<ul style="list-style-type: none"> write polynomial equation given its roots. 	<p>Student Edition: 365-366 Example 4, 367 #33-#38, #42, #44 <i>Study Guide and Review</i> 378 6-8</p> <p>Teacher Wraparound Edition: AE 365</p>
<ul style="list-style-type: none"> solve polynomial equations by synthetic division, graphing and factoring. 	<p>Student Edition: 327-329, 349-355, 356-361</p> <p>Teacher Wraparound Edition: AE 327, 350, 351; FM 327, 357; PA 355, 361</p>
<ul style="list-style-type: none"> graph rational functions and determine places of discontinuity and compare graphs with those of continuous functions. 	<p>Student Edition: 95-96, 98-101, 473-474, 476-477</p> <p>Teacher Wraparound Edition: A 101; AE 96, 475; I 474</p>

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<ul style="list-style-type: none"> organize data in matrices. 	<p>Student Edition: 162-163, 165 #1, #7-#8, 166 #21, #23, #25-#26, 170-171 Example 3, 173 #5, 174 #22, 175 #40, #42 <i>Get Ready</i> 169 <i>Spreadsheet Lab</i> 168</p> <p>Teacher Wraparound Edition: AE 163; T 169</p>
<ul style="list-style-type: none"> add, subtract, and multiply matrices. 	<p>Student Edition: 169-175, 177-184, 185-186 <i>Graphing Calculator Lab</i> 172</p> <p>Teacher Wraparound Edition: AE 170, 172, 178, 179, 180; FM 171; PA 171, 179</p>
<ul style="list-style-type: none"> solve matrix equations. 	<p>Student Edition: 164 Example 3, 165 #15-#20, 210, 216-220 <i>Graphing Calculator Lab</i> 223</p> <p>Teacher Wraparound Edition: AE 217, 218; FM 218</p>
<ul style="list-style-type: none"> evaluate the determinant. 	<p>Student Edition: 194-199, 201-204, 207 #34-#38, 210</p> <p>Teacher Wraparound Edition: AE 195, 196, 197; FM 197; I 195</p>
<ul style="list-style-type: none"> apply Cramer's rule to solution of systems of equations. 	<p>Student Edition: 201-206 <i>Study Guide and Review</i> 227 4-6</p> <p>Teacher Wraparound Edition: AE 202, 204; DI 204; PA 207</p>
<ul style="list-style-type: none"> solve problems using right triangle trigonometry. 	<p>Student Edition: 759-767, 776-777, 785-792, 793-798 <i>Algebra Lab</i> 775</p> <p>Teacher Wraparound Edition: AE 760, 761, 762, 763; PA 767</p>
<ul style="list-style-type: none"> discover sequences based on a mathematical model. 	<p>Student Edition: 622-628, 636, 641, 658-662, 664-669 <i>Algebra Lab</i> 663 <i>Graphing Calculator Lab</i> 642</p> <p>Teacher Wraparound Edition: AE 623, 624, 631, 637, 659; PA 641</p>

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<ul style="list-style-type: none"> explore a variety of infinite sequences and informally evaluate their limits. 	<p>Student Edition: 650-655 <i>Graphing Calculator Lab</i> 642</p> <p>Teacher Wraparound Edition: A 642; AE 651, 652; EA 655; DI 652</p>
<ul style="list-style-type: none"> find sums of arithmetic and geometric series. 	<p>Student Edition: 629-635, 643-649, 650-655</p> <p>Teacher Wraparound Edition: AE 630, 632, 644, 651; FM 631, 646; PA 635</p>
<ul style="list-style-type: none"> calculate factorials. 	<p>Student Edition: 666-668, 686, 690-693, 697-698 Example 1</p> <p>Teacher Wraparound Edition: AE 692; I 666</p>
<ul style="list-style-type: none"> find permutations and combinations. 	<p>Student Edition: 690-695, 697-699 <i>Reading Math</i> 696 <i>Study Guide and Review</i> 746 <i>Study Tip</i> 711</p> <p>Teacher Wraparound Edition: A 695; AE 691, 692</p>
<ul style="list-style-type: none"> estimate probabilities and predict outcomes from real world data. 	<p>Student Edition: 697-702, 704-709, 710-715 <i>Algebra Lab</i> 703</p> <p>Teacher Wraparound Edition: AE 698, 699, 704, 705, 706, 711; PA 702</p>
<ul style="list-style-type: none"> write direct and inverse variation equations. 	<p>Student Edition: 465-471, 474-475 <i>Study Guide and Review</i> 491 8-4</p> <p>Teacher Wraparound Edition: AE 766, 767; I 767; PA 471</p>
<ul style="list-style-type: none"> analyze and describe how a change in an independent variable can produce a change in a dependent variable. 	<p>Student Edition: 61, 63 #54, 68 #3-#4, 69 #18-#19, 70 #50-#52, 81 Example 3, 83 #23, 236, 239-240 Example 4 <i>Study Tip</i> 87</p> <p>Teacher Wraparound Edition: AE 239</p>