



# Algebra 2

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## STANDARDS

## PAGE REFERENCES

**Algebraic Reasoning: Patterns And Functions** – Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

**How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?**

**1.1 Understand and describe patterns and functional relationships.**

- a. Describe relationships and make generalizations about patterns and functions.

**Student Edition:**

337 #46-#48, #56, 622-628, 636-641, 658-662, 664-665

*Algebra Lab* 663

*Graphing Calculator Lab* 642

*Spreadsheet Lab* 657

*Standardized Test Practice* 380 #2, 680-681 #2-#5, #11

*Study Guide and Review* 675 11-1, 676 11-3, 677 11-6

**Teacher Wraparound Edition**

A 628; AE 623-625, 637-638, 659-660; PAP 628, 641, 662

## STANDARDS

## PAGE REFERENCES

## 1.2 Represent and analyze quantitative relationships in a variety of ways.

- a. Represent and analyze linear and nonlinear functions and relations symbolically and with tables and graphs.

**Student Edition:**

58-70, 79-84, 95-101, 236-244, 286-292, 331-337, 339-345, 457-463, 473-478, 498-506, 509-517, 822-828, 829-836

*Graphing Calculator Lab* 78, 284-285, 464

**Teacher Wraparound Edition**

AE 68, 287, 340, 499-500

## 1.3 Use operations, properties and algebraic symbols to determine equivalence and solve problems.

- a. Manipulate equations, inequalities and functions to solve problems.

**Student Edition:**

18-26, 27-31, 33-39, 41-48, 246-251, 253-258, 268-275, 276-283, 294-300, 349-355, 479-486, 528-533, 806-811, 861-866

*Graphing Calculator Lab* 487, 534-535, 860

**Teacher Wraparound Edition**

A 355; AE 248; PAP 21

**Numerical and Proportional Reasoning** – Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies.

**How are quantitative relationships represented by numbers?**

## 2.1 Understand that a variety of numerical representations can be used to describe quantitative relationships.

- a. Extend the understanding of number to include integers, rational numbers and real numbers.

**Student Edition:**

11-17, 39 #66-#68

*Practice Test* 53 #6-#8

*Study Guide and Review* 50 1-2

**Teacher Wraparound Edition**

AE 12; PAP 17

- b. Interpret and represent large sets of numbers with the aid of technologies.

**Student Edition:**

47 #46-#49

*Graphing Calculator Lab* 36, 92-94, 252, 346-347, 518-519, 719

*Spreadsheet Lab* 168

STANDARDS	PAGE REFERENCES
<p><b>2.2 Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.</b></p>	
<p>a. Develop strategies for computation and estimation using properties of number systems to solve problems.</p>	<p><b>Student Edition:</b>  11-17, 18-26, 27-31, 33-39, 41-48  <i>Practice Test</i> 53  <i>Standardized Test Practice</i> 54-55  <i>Study Guide and Review</i> 50-52  <b>Teacher Wraparound Edition</b>  A 39, 48; AE 14, 21-22, 44; DI 25, 35; FMC 20, 35;  I 20; PAP 21, 31</p>
<p>b. Solve proportional reasoning problems.</p>	<p><b>Student Edition:</b>  463 #67-#70, 465-471, 478 #40, 486 #47  <i>Mid-Chapter Quiz</i> 472 #20-#25  <i>Practice Test</i> 493 #17-#23  <i>Prerequisite Skills</i> 879-880  <i>Quick Check</i> 441 #11-#20  <i>Study Guide and Review</i> 491 8-4  <b>Teacher Wraparound Edition</b>  AE 466-467</p>
<p><b>Geometry and Measurement</b> – Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies.  <b>How do geometric relationships and measurements help us to solve problems and make sense of our world?</b></p>	
<p><b>3.1 Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.</b></p>	
<p>a. Investigate relationships among plane and solid geometric figures using geometric models, constructions and tools.</p>	<p><b>Student Edition:</b>  185-192, 200 #44-#45, 207 #39-#40, 214 #37-#41  <i>Mid-Chapter Quiz</i> 193 #15-#16  <i>Practice Test</i> 229 #16-#17  <i>Standardized Test Practice</i> 230 #1  <i>Study Guide and Review</i> 226 4-4  <b>Teacher Wraparound Edition</b>  AE 186-188; PAP 192</p>

STANDARDS	PAGE REFERENCES
<p>b. Develop and evaluate mathematical arguments using reasoning and proof.</p>	<p>This standard can be met throughout the textbook. Specific examples are found on the following pages:</p> <p><b>Student Edition:</b>  17 #63, 25 #68, 151 #30, 257 #50, 274 #62-#63, 317 #43-#44, 354 #57, 414 #60, 485 #39, 516 #72, 549 #21, 573 #43, 640 #54, 670-673, 792 #37, 842-846</p> <p><i>Practice Test</i> 679 #21-#23  <i>Study Guide and Review</i> 678 11-8</p> <p><b>Teacher Wraparound Edition</b>  A 372; AE 671</p>
<p><b>3.2 Use spatial reasoning, location and geometric relationships to solve problems.</b></p>	
<p>a. Verify geometric relationships using algebra, coordinate geometry, and transformations.</p>	<p><b>Student Edition:</b>  47 #44-#45, 76 #47, 185-192, 200 #44-#45, 207 #39-#40</p> <p><i>Practice Test</i> 229 #15-#17  <i>Standardized Test Practice</i> 230 #1  <i>Study Guide and Review</i> 226 4-4</p> <p><b>Teacher Wraparound Edition</b>  AE 186-188</p>
<p><b>3.3 Develop and apply units, systems, formulas and appropriate tools to estimate and measure.</b></p>	
<p>a. Solve a variety of problems involving 1-, 2-, and 3-dimensional measurements using geometric relationships and trigonometric ratios.</p>	<p><b>Student Edition:</b>  8 Example 2, 15 #34, 24 #43, 26 #79, 31 #60-#61, 47 #44-#45, 69 #34, 316 #27, 322 #14, 353-354 #36-#38, #39, #48-#50, 370 Example 2, 759-767, 785-792, 793-798</p> <p><i>Standardized Test Practice</i> 112 #4, 380-381 #3, #6-#7</p> <p><b>Teacher Wraparound Edition</b>  AE 761-764, 786</p>

**STANDARDS****PAGE REFERENCES**

**Working with Data: Probability and Statistics** – Data can be analyzed to make informed decisions using a variety of strategies, tools and technologies.

**How can collecting, organizing and displaying data help us analyze information and make reasonable predictions and informed decisions?**

**4.1 Collect, organize and display data using appropriate statistical and graphical methods.**

- a. Create the appropriate visual or graphical representation of real data.

**Student Edition:**

86-91, 162-163 Example 1, 165-166 #1, #7-#8, #21, #23, #25-#26, 170-171 Example 3, 173-175 #5, #22, #40, #42-#43, 179 Example 3, 182-183 #10, #28, #35, #37-#38, 248 Example 5, 341 Example 4

*Algebra Lab* 734 #1

*Graphing Calculator Lab* 92-94, 252, 293, 346-347, 518-519

*Spreadsheet Lab* 168

**Teacher Wraparound Edition**

AE 163 #1, 170 #3; DI 178; PAP 91

**4.2 Analyze data sets to form hypotheses and make predictions.**

- a. Analyze real-world problems using statistical techniques.

**Student Edition:**

86-91, 101 #54-#56, 105 #47-#49, 717-723, 724-728, 739 #42-#45

*Algebra Lab* 734, 740

*Graphing Calculator Lab* 92-94

*Practice Test* 111 #27-#29

*Standardized Test Practice* 752 #1, #3

*Study Guide and Review* 109, 748

**Teacher Wraparound Edition**

A 91; AE 87-88, 718, 725; PAP 91

**4.3 Understand and apply basic concepts of probability.**

- a. Understand and apply the principles of probability in a variety of situations.

**Student Edition:**

697-702, 703-709, 710-715, 723 #42-#47, 728 #34-#36, 733 #31-#34

*Mid-Chapter Quiz* 716 #9-#21

*Practice Test* 751 #10-#11, #14, #16-#20

*Standardized Test Practice* 752-753 #4-#5, #12c

*Study Guide and Review* 746 12-3, 747

**Teacher Wraparound Edition**

A 702, 715; AE 698-699, 704-706, 711-712; I 712; PAP 702, 707; T 710