



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:

Example P14, 33

Exercises P10 #1, #2, P15

Explore 10

H.O.T. Problems 15 #43

Posttest P22 #2, #34-#37

Pretest P4 #2

Real-World Example P8

Standardized Test Practice 37 #15

Teacher Edition:

AE P14, P15, 34

STANDARDS	PAGE REFERENCES
1.2 Represent and analyze quantitative relationships in a variety of ways.	
<p>a. Represent and analyze linear and nonlinear functions and relations symbolically and with tables and graphs.</p>	<p>Student Edition: 33 <i>Check Your Understanding</i> 35, 409, 506 #7 <i>Example</i> 33, 34, 406, 408 <i>Extra Practice</i> 811, 826 <i>Practice and Problem Solving</i> 35-36, 409-410, 507 #20-#22, 508 #28, #29 <i>Practice Test</i> 53 #23 <i>Real-World Example</i> 407 <i>Standardized Test Practice</i> 466 #7 <i>Study Guide and Review</i> 51 #28, 459 #23, 525 #63-#69</p> <p>Teacher Edition: AE 34, 35, 407; TNT 407; WO 35</p>
1.3 Use operations, properties and algebraic symbols to determine equivalence and solve problems.	
<p>a. Manipulate equations, inequalities and functions to solve problems.</p>	<p>Student Edition: 184, 191, 220, 241 <i>Check Your Understanding</i> 187, 194, 202, 231, 244 <i>Example</i> 185, 186, 191, 192, 193, 199, 200, 229, 230, 241, 242, 244 <i>Extra Practice</i> 817, 818, 819 <i>Key Concept</i> 184, 185, 191, 192, 241, 242, 244 <i>Mid-Chapter Quiz</i> 190 #15-#25 <i>Practice and Problem Solving</i> 187-188, 194-195, 202-203, 231-232, 245-246 <i>Real-World Example</i> 186, 192, 230, 243 <i>Standardized Test Example</i> 201 <i>Standardized Test Practice</i> 204 <i>Study Guide and Review</i> 211 #23-#43, 255 #16-#22, 256 #31-#39 <i>Study Tip</i> 186</p> <p>Teacher Edition: AE 185, 186, 192, 200, 201, 230, 242; DI 201, 230; TNT 200; WO 194</p>

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<p>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.</p> <p>How are quantitative relationships represented by numbers?</p>	
<p>2.1 Understand that a variety of numerical representations can be used to describe quantitative relationships.</p>	
<p>a. Extend the understanding of number to include integers, rational numbers and real numbers.</p>	<p>Student Edition: 61, 128, 543 <i>Check Your Understanding</i> 130 #8-#10, 546 #1-#4 <i>Concept Summary</i> 130 <i>Example</i> 130, 544 <i>Extra Practice</i> 814, 832 <i>H.O.T. Problems</i> 132 #59, 547 #54-#56 <i>Key Concept</i> 543 <i>Mid-Chapter Quiz</i> 556 #13-#16 <i>Practice and Problem Solving</i> 131 #29-#34, 546 #14-#25, 547 #44-#47 <i>Study Guide and Review</i> 160 #32-#35, 578 #20-#23</p> <p>Teacher Edition: AE 130, 544; DI 129, 544; FMC 130, 131, 545; SQ 128</p>
<p>b. Interpret and represent large sets of numbers with the aid of technologies.</p>	<p>The following page references include activities that can be expanded to meet this standard for large sets of numbers.</p> <p>Student Edition: <i>Extend</i> 17, 38, 227, 375, 439-440, 648-649</p>
<p>2.2 Use numbers and their properties to compute flexibly and fluently, and to reasonably estimate measures and quantities.</p>	
<p>a. Develop strategies for computation and estimation using properties of number systems to solve problems.</p>	<p>Student Edition: <i>Check Your Understanding</i> 21 #8-#13, 180 #7-#12, 353 <i>Example</i> 20, 171, 173, 179, 352 <i>Key Concept</i> 18, 19, 171 <i>Practice and Problem Solving</i> 21 #25-#36, 174 #31-#39, 181 #21-#32, 353-354 <i>Preparing for Standardized Tests</i> 388-389 <i>Real-World Example</i> 352 <i>Study Tip</i> 72, 85, 193, 200, 337</p> <p>Teacher Edition: AE 20, 172, 173, 179, 352</p>

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b. Solve proportional reasoning problems.	<p>Student Edition: 287 <i>Check Your Understanding</i> 290, 303 #1, #2, 314 <i>Example</i> 288, 289, 302, 314 <i>Extra Practice</i> 821 <i>Practice and Problem Solving</i> 290-291, 304 #4-#7, 315 <i>Practice Test</i> 323 #4, #10, #11, #13 <i>Real-World Example</i> 288, 313 <i>Study Guide and Review</i> 320 #30-#41, #47-#49</p> <p>Teacher Edition: AE 288, 289, 302, 314</p>
<p>Geometry and Measurement – Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies.</p> <p>How do geometric relationships and measurements help us to solve problems and make sense of our world?</p>	
<p>3.1 Use properties and characteristics of two- and three-dimensional shapes and geometric theorems to describe relationships, communicate ideas and solve problems.</p>	
a. Investigate relationships among plane and solid geometric figures using geometric models, constructions and tools.	<p>Student Edition: <i>Concepts and Skills Bank</i> 870-874 <i>Explore</i> 596-597, 670, 682, 690, 696, 708</p> <p>Teacher Edition: AE 870, 871, 872; DI 692</p>
b. Develop and evaluate mathematical arguments using reasoning and proof.	<p>Student Edition: <i>Explore</i> 597 #9, #10, 611 #4, #5, 670 #6, 690 #7, 696 #7, 708 #11 <i>H.O.T. Problems</i> 615 #28, 621 #37, 629 #36, 634 #28, 640 #35, 646 #25, 668 #27, 680 #24, 687 #28, #29, 694, #20, 700 #21, 706 #24, 714 #23, #24</p>
<p>3.2 Use spatial reasoning, location and geometric relationships to solve problems.</p>	
a. Verify geometric relationships using algebra, coordinate geometry, and transformations.	<p>Student Edition: 102, 103 <i>Check Your Understanding</i> 104 <i>Example</i> 591 <i>Practice and Problem Solving</i> 104-105, 225 #16, #17, 593 #21-#25, 602 #11, #22, #23</p> <p>Teacher Edition: AE 591</p>

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<p>3.3 Develop and apply units, systems, formulas and appropriate tools to estimate and measure.</p>	
<p>a. Solve a variety of problems involving 1-, 2-, and 3-dimensional measurements using geometric relationships and trigonometric ratios.</p>	<p>Student Edition: <i>Check Your Understanding</i> 314 <i>Concepts and Skills Bank</i> 875-878 <i>Example</i> 314 <i>Practice and Problem Solving</i> 315-316 <i>Real-World Example</i> 223, 313</p> <p>Teacher Edition: AE 314; TNT 875, 878</p>
<p>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?</p>	
<p>4.1 Collect, organize and display data using appropriate statistical and graphical methods.</p>	
<p>a. Create the appropriate visual or graphical representation of real data.</p>	<p>Student Edition: <i>Check Your Understanding</i> 378 #1, #2, 739 #1, #2, 752 #1, 759 #1, #2 <i>Example</i> 376, 377, 737, 750, 757 <i>H.O.T. Problems</i> 380 #16 <i>Practice and Problem Solving</i> 379 #4-#7, #13, #14, 739 #5-#8, #13-#16, 753 #4-#7, 760 #5, #6, #10</p> <p>Teacher Edition: AE 377, 738, 751, 758</p>
<p>4.2 Analyze data sets to form hypotheses and make predictions.</p>	
<p>a. Analyze real-world problems using statistical techniques.</p>	<p>Student Edition: <i>Check Your Understanding</i> 739 #3, #4, 752 #2, #3, 759 #3, #4 <i>Example</i> 738, 758 <i>Explore</i> 729 <i>Practice and Problem Solving</i> 740 #9, #10, #16, 748 #9-#11, 753 #9, #10, 760 #7-#11 <i>Real-World Example</i> 751, 752, 758</p> <p>Teacher Edition: AE 739, 752, 758</p>

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4.3 Understand and apply basic concepts of probability.

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

Student Edition:

765, 790

Check Your Understanding 768, 779 #4, #5, 793

Example 765, 766, 779, 791

Explore 789

Extra Practice 841, 842

Practice and Problem Solving 768-769,
780 #12-#15, 793-794

Real-World Example 767, 778, 792

Standardized Test Practice 806 #7, #8, #11

Study Guide and Review 801 #23-#26,
802 #29-#33, #38-#42

Teacher Edition:

AE 766, 779, 791, 792