



Algebra 1

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STANDARDS	PAGE REFERENCES
NUMBER AND OPERATIONS	
Understand real number concepts	
<p>N.ME.08.01 Understand the meaning of a square root of a number and its connection to the square whose area is the number; understand the meaning of a cube root and its connection to the volume of a cube.</p>	<p>Student Edition: P9 ex 4 – ex 5, P10 #23-#31, 148 #1, 612-617, 623 #44-#49, 628 #43-#48, 629 #8-#12, 657 #18-#27</p> <p>Teacher Wraparound Edition: AE P9, 613, 614; F 613, 614; T 612; TNT 613</p>
<p>N.ME.08.02 Understand meanings for zero and negative integer exponents.</p>	<p>Student Edition: 410 ex 3, 411 ex 4, 412 #12-#13, 413 #31-#42, 414 #59, 415 #69, 429 #67-#72, 430 #7, 460 #25-#26, 463 #5-#6, 665 #14</p> <p><i>Key Concept</i> 410 <i>Study Tip</i> 410, 411</p> <p>Teacher Wraparound Edition: AE 410, 411; T 416; TNT 410, 411; WO 410, 411</p>
<p>N.ME.08.03 Understand that in decimal form, rational numbers either terminate or eventually repeat, and that calculators truncate or round repeating decimals; locate rational numbers on the number line; know fraction forms of common repeating decimals, e.g., $0.1 = \frac{1}{9}$; $0.3 = \frac{1}{3}$.</p>	<p>Student Edition: P7 ex 1, p8 ex 3, p10 #1-#2</p> <p>Teacher Wraparound Edition: A P10; AE P7, P8; T P7</p>

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<p>N.ME.08.04 Understand that irrational numbers are those that cannot be expressed as the quotient of two integers, and cannot be represented by terminating or repeating decimals; approximate the position of familiar irrational numbers, e.g., $\sqrt{2}$, $\sqrt{3}$, π, on the number line.</p>	<p>Student Edition: P7 ex 1</p> <p>Teacher Wraparound Edition: AE P7; T P7</p>
<p>N.FL.08.05 Estimate and solve problems with square roots and cube roots using calculators.</p>	<p>Student Edition: P9 ex 4 – ex 5, P10 #23-#31, 148 #1, 612-617, 623 #44-#49, 628 #43-#48, 629 #8-#12, 657 #18-#27</p> <p>Teacher Wraparound Edition: AE P9, 613, 614; F 613, 614; T 612; TNT 613</p>
<p>N.FL.08.06 Find square roots of perfect squares and approximate the square roots of non-perfect squares by locating between consecutive integers, e.g., $\sqrt{130}$ is between 11 and 12.</p>	<p>Student Edition: P9 ex 4 – ex 5, P10 #23-#31, 148 #1, 612-617, 623 #44-#49, 628 #43-#48, 629 #8-#12, 657 #18-#27</p> <p>Teacher Wraparound Edition: AE P9, 613, 614; F 613, 614; T 612; TNT 613</p>
<p>Solve problems</p>	
<p>N.MR.08.07 Understand percent increase and percent decrease in both sum and product form, e.g., 3% increase of a quantity x is $x + .03x = 1.03x$.</p>	<p>Student Edition: 119-124, 131 #45-#50, 138 #34, 143 #61-#70, 145 #18-#20</p> <p>Teacher Wraparound Edition: AE 120, 121; DI 124; T 119; TNT 121; TWT 121; WA 122</p>
<p>N.MR.08.08 Solve problems involving percent increases and decreases.</p>	<p>Student Edition: 119-124, 131 #45-#50, 138 #34, 143 #61-#70, 145 #18-#20</p> <p>Teacher Wraparound Edition: AE 120, 121; DI 124; T 119; TNT 121; TWT 121; WA 122</p>
<p>N.FL.08.09 Solve problems involving compounded interest or multiple discounts.</p>	<p>Student Edition: 126, 131 #41, 574 ex 2, 575 #2, 576 #17, 589 #40, 595 #50-#51, 597 #25, 623 #56</p> <p>Teacher Wraparound Edition: AE 574; F 574</p>
<p>N.MR.08.10 Calculate weighted averages such as course grades, consumer price indices, and sports ratings.</p>	<p>Student Edition: 132-138, 144 #78-#80, 145 #23-#24, 160 #69, 166 #58</p> <p>Teacher Wraparound Edition: A 138; AE 133, 134, 135; DI 138; T 132; TNT 133</p>

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<p>N.FL.08.11 Solve problems involving ratio units, such as miles per hour, dollars per pound, or persons per square mile.*</p>	<p>Student Edition: 128 ex 4, 129 #18-#19, 132-138, 144 #78-#80, 145 #23-#24, 160 #69, 166 #58</p> <p>Teacher Wraparound Edition: A 138; AE 128, 133, 134, 135; DI 138; T 132; TNT 133</p>
ALGEBRA	
Understand the concept of non-linear functions using basic examples	
<p>A.RP.08.01 Identify and represent linear functions, quadratic functions, and other simple functions including inversely proportional relationships ($y = k/x$); cubics ($y = ax^3$); roots ($y = \sqrt{x}$); and exponentials ($y = a^x$, $a > 0$); using tables, graphs, and equations.*</p>	<p>Student Edition: 187-199, 214-221, 224-230, 231-236 <i>Graphing Technology Lab</i> 222-223</p> <p>Teacher Wraparound Edition: A 221, 236; AE 189, 190, 215, 216, 217, 225, 226, 232, 233; DI 219, 226; F 233; PA 230</p>
<p>A.PA.08.02 For basic functions, e.g., simple quadratics, direct and indirect variation, and population growth, describe how changes in one variable affect the others.</p>	<p>Student Edition: 220 #64, 242 #46, 544-549, 557 #57-#62, 564 #66-#68, 566 #15-#17, 594 #23-#28, 597 #8-#10</p> <p><i>Concept Summary</i> 680 <i>Graphing Technology Lab</i> 222-223</p> <p>Teacher Wraparound Edition: A 223, 549; AE 545, 546; DI 545, 549; F 546; TNT 547; TWT 216, 238</p>
<p>A.PA.08.03 Recognize basic functions in problem context, e.g., area of a circle is πr^2, volume of a sphere is $\frac{4}{3} \pi r^3$, and represent them using tables, graphs, and formulas.</p>	<p>Student Edition: 187-199, 214-221, 224-230, 231-236 <i>Graphing Technology Lab</i> 222-223</p> <p>Teacher Wraparound Edition: A 221, 236; AE 189, 190, 215, 216, 217, 225, 226, 232, 233; DI 219, 226; F 233; PA 230</p>
<p>A.RP.08.04 Use the vertical line test to determine if a graph represents a function in one variable.</p>	<p>Student Edition: 47 ex 3, 49 #6-#8, 50 #25, 66 #67</p> <p><i>Study Tip</i> 47</p> <p>Teacher Wraparound Edition: AE 47; TWT 47</p>
Understand and represent quadratic functions	
<p>A.RP.08.05 Relate quadratic functions in factored form and vertex form to their graphs, and vice versa; in particular, note that solutions of a quadratic equation are the x-intercepts of the corresponding quadratic function.</p>	<p>Student Edition: 525-535, 537-542, 549 #44-#49, 566 #1-#4, 593 #11-#14, 597 #1-#2, 600 #1, 601 #11</p> <p>Teacher Wraparound Edition: AE 526, 527, 529, 530, 538, 539; TNT 539</p>

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<p>A.RP.08.06 Graph factorable quadratic functions, finding where the graph intersects the x-axis and the coordinates of the vertex; use words “parabola” and “roots”; include functions in vertex form and those with leading coefficient -1, e.g., $y = x^2 - 36$, $y = (x - 2)^2 - 9$; $y = -x^2$; $y = -(x - 3)^2$.</p>	<p>Student Edition: 525-535, 537-542, 549 #44-#49, 566 #1-#4, 593 #11-#14, 597 #1-#2, 600 #1, 601 #11</p> <p>Teacher Wraparound Edition: AE 526, 527, 529, 530, 538, 539; TNT 539</p>
Recognize, represent, and apply common formulas	
<p>A.FO.08.07 Recognize and apply the common formulas: $(a + b)^2 = a^2 + 2ab + b^2$ $(a - b)^2 = a^2 - 2ab + b^2$ $(a + b)(a - b) = a^2 - b^2$; represent geometrically.</p>	<p>Student Edition: 453-458, 462 #52-#57, 463 #20-#21, 474 #39-#44</p> <p>Teacher Wraparound Edition: A 458; AE 454, 455; DI 455; F 454, 455; T 453</p>
<p>A.FO.08.08 Factor simple quadratic expressions with integer coefficients, e.g., $x^2 + 6x + 9$, $x^2 + 2x - 3$, and $x^2 - 4$; solve simple quadratic equations, e.g., $x^2 = 16$ or $x^2 = 5$ (by taking square roots); $x^2 - x - 6 = 0$, $x^2 - 2x = 15$ (by factoring); verify solutions by evaluation.</p>	<p>Student Edition: 471-474, 476-482, 485-491, 492 #20-#22, 493-498, 499-504</p> <p><i>Algebra Lab</i> 475, 483-484</p> <p>Teacher Wraparound Edition: AE 472, 477, 478, 479, 486, 487, 488, 494, 495, 500; DI 488, 501, 504; F 500; TWT 477</p>
<p>A.FO.08.09 Solve applied problems involving simple quadratic equations.</p>	<p>Student Edition: 472 ex 3, 473 #24, 479 ex 5, 480 #46, 488 ex 5, 489 #32, 490 #37, 492 #19, 495 ex 4, 496 #29, 497 #38, 502 #45, 509 ex 5, 510 #44-#45, 511 #51, 515 #40</p> <p>Teacher Wraparound Edition: AE 479, 488, 495, 509</p>
Understand solutions and solve equations, simultaneous equations, and linear inequalities	
<p>A.FO.08.10 Understand that to solve the equation $f(x) = g(x)$ means to find all values of x for which the equation is true, e.g., determine whether a given value, or values from a given set, is a solution of an equation (0 is a solution of $3x^2 + 2 = 4x + 2$, but 1 is not a solution).</p>	<p>Student Edition: 31 ex 1, 34 #1-#4, 35 #39-#42</p> <p>Teacher Wraparound Edition: AE 32</p>
<p>A.FO.08.11 Solve simultaneous linear equations in two variables by graphing, by substitution, and by linear combination; estimate solutions using graphs; include examples with no solutions and infinitely many solutions.</p>	<p>Student Edition: 333-339, 342-347, 348-354, 355-360</p> <p><i>Graphing Technology Lab</i> 340-341</p> <p>Teacher Wraparound Edition: A 347, 354, 360; AE 334, 335, 343, 344, 349, 350, 356, 357; DI 334, 347, 350, 360; F 335, 349, 350, 356</p>

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<p>A.FO.08.12 Solve linear inequalities in one and two variables, and graph the solution sets.</p>	<p>Student Edition: 283-288, 290-295, 296-301, 302 #1-#4, 304-309, 315-320 <i>Algebra Lab</i> 289 <i>Graphing Technology Lab</i> 321</p> <p>Teacher Wraparound Edition: A 295; AE 284, 285, 291, 292, 297, 298, 305; DI 288, 301, 309; TNT 285; TWT 298</p>
<p>A.FO.08.13 Set up and solve applied problems involving simultaneous linear equations and linear inequalities.</p>	<p>Student Edition: 335 ex 3, 336 #9, 337 #25, 338 #45, 344 ex 4, 345 #23, 346 #25, 347 #32, 350 ex 4, 351 #6, 352 #31, 353 #32, 357 ex 3, 358 #20, 359 #27, 361 #13, 360 #35</p> <p>Teacher Wraparound Edition: AE 335, 344, 350, 357</p>
GEOMETRY	
Understand and use the Pythagorean Theorem	
<p>G.GS.08.01 Understand at least one proof of the Pythagorean Theorem; use the Pythagorean Theorem and its converse to solve applied problems including perimeter, area, and volume problems.</p>	<p>Student Edition: 630-635, 641 #63-#68, 647 #41-#46, 659 #44-#52, 661 #14-#15, 683 #59-#64</p> <p>Teacher Wraparound Edition: A 635; AE 631; DI 631, 635; TWT 632, 638; WO 634</p>
<p>G.LO.08.02 Find the distance between two points on the coordinate plane using the distance formula; recognize that the distance formula is an application of the Pythagorean Theorem.</p>	<p>Student Edition: 636-641, 647 #35-#40, 659 #53-#56, 661 #16-#19, 665 #16, 690 #62-#65</p> <p>Teacher Wraparound Edition: A 641; AE 637; DI 637; F 637; T 636; TWT 638; WO 639</p>
Solve problems about geometric figures	
<p>G.SR.08.03 Understand the definition of a circle; know and use the formulas for circumference and area of a circle to solve problems.</p>	<p>Student Edition: P24 ex 3, P25 #10-#12, P27 ex 3, P28 #10-#12, 15 #73, 44 #52, 403 ex 4, 512 #64, 609 #42</p> <p>Teacher Wraparound Edition: AE P24, P27</p>
<p>G.SR.08.04 Find area and perimeter of complex figures by sub-dividing them into basic shapes (quadrilaterals, triangles, circles).</p>	<p>Student Edition: P28 #21-#23, 414 #60, 415 #66, 427 #49, 449 ex 3, 450 #33-#34, 456 #47-#48, 457 #55-#56, 461 #36, 462 #58, 480 #45, 502 #44, 516 #69, 563 #49, 572 #48, 735 #8</p> <p>Teacher Wraparound Edition: DI 501</p>

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<p>G.SR.08.05 Solve applied problems involving areas of triangles, quadrilaterals, and circles.</p>	<p>Student Edition: P28 #17-#19, 9 #46, 13 #36, 99 ex 4, 100 #22, 117 #64, 148 #2, 166 #54, 208 #8, 403 ex 4, 405 #39-#40, 414 #60, 436 #28, 440 ex 3, 442 #30, 443 #43, 449 ex 3, 451 #43, 460 #28</p> <p>Teacher Wraparound Edition: AE 449</p>
<p>Understand concepts of volume and surface area, and apply formulas</p>	
<p>G.SR.08.06 Know the volume formulas for generalized cylinders ((area of base) x height), generalized cones and pyramids ($\frac{1}{3}$ (area of base) x height), and spheres ($\frac{4}{3} \pi$ (radius)³) and apply them to solve problems.</p>	<p>Student Edition: P29-P30, 7 #29, 8 #41, 9 #43, 22 #62, 37 #82, 52 #67-#69, 71 #12, 200 #29, 320 #54, 339 #54, 386 #46, 405 #58-#60, 428 #50, 430 #5, 460 #19, 463#3</p> <p>Teacher Wraparound Edition: A P30; AE P29; WO P30</p>
<p>G.SR.08.07 Understand the concept of surface area, and find the surface area of prisms, cones, spheres, pyramids, and cylinders.</p>	<p>Student Edition: P31-P32, 29 #71, 130 #34, 209 #14, 309 #45, 404 #16, 454 ex 3, 629 #29, 659 #41, 705 #52, 762 #36</p> <p>Teacher Wraparound Edition: A P32; AE P31; WO P32</p>
<p>Visualize solids</p>	
<p>G.SR.08.08 Sketch a variety of two-dimensional representations of three-dimensional solids including orthogonal views (top, front, and side), picture views (projective or isometric), and nets; use such two-dimensional representations to help solve problems.</p>	<p>Please see Glencoe's <i>Geometry</i> © 2010 for the following references.</p> <p>Student Edition: 75, 821, 822</p>
<p>Understand and apply concepts of transformation and symmetry</p>	
<p>G.TR.08.09 Understand the definition of a dilation from a point in the plane, and relate it to the definition of similar polygons.</p>	<p>Student Edition: 545 ex 2, 547 #2, 548 #33</p> <p>Teacher Wraparound Edition: AE 545</p>
<p>G.TR.08.10 Understand and use reflective and rotational symmetries of two-dimensional shapes and relate them to transformations to solve problems.</p>	<p>Please see Glencoe's <i>Geometry</i> © 2010 for the following references.</p> <p>Student Edition: 653-659</p>

STANDARDS	PAGE REFERENCES
DATA AND PROBABILITY	
Draw, explain, and justify conclusions based on data	
<p>D.AN.08.01 Determine which measure of central tendency (mean, median, mode) best represents a data set, e.g., salaries, home prices, for answering certain questions; justify the choice made.</p>	<p>Student Edition: P37-P39, P45 #65-#66, 29 #68-#70, 747 ex 1, 750 #1-#2, 751 #9-#13, 762 #32-#33, 763 #10-#11, 770 #44-#47, 794 #9-#11, 797 #10-#12 <i>Concept Summary</i> 746</p> <p>Teacher Wraparound Edition: A P39, 755; AE P37, P38, 747; TWT P37, 748</p>
<p>D.AN.08.02 Recognize practices of collecting and displaying data that may bias the presentation or analysis.</p>	<p>Student Edition: P40-P43, P45 #69, 740-745, 746-755, 762 #34-#35, 763 #12, 794 #6-#8</p> <p>Teacher Wraparound Edition: A P43, 745; AE P40, P41, P42, 741, 742, 748, 749; DI 742; F 741; T 740, 746; TWT 741</p>
Understand probability concepts for simple and compound events	
<p>D.PR.08.03 Compute relative frequencies from a table of experimental results for a repeated event. Interpret the results using relationship of probability to relative frequency.*</p>	<p>Student Edition: P40-P43, P45 #71, 787-792, 796 #33-#36, 797 #19</p> <p>Teacher Wraparound Edition: AE 788, 789; DI 792; TWT 792</p>
<p>D.PR.08.04 Apply the Basic Counting Principle to find total number of outcomes possible for independent and dependent events, and calculate the probabilities using organized lists or tree diagrams.</p>	<p>Student Edition: P35 ex 4, P36 #20-#22, 44 #54, 764-770 <i>Key Concept</i> P35</p> <p>Teacher Wraparound Edition: AE P34, P35, 765, 766, 767; DI 766; TWT P34</p>
<p>D.PR.08.05 Find and/or compare the theoretical probability, the experimental probability, and/or the relative frequency of a given event.*</p>	<p>Student Edition: P33-P36, 44 #54, 771-778, 779-784, 787-792, 796 #25-#30</p> <p>Teacher Wraparound Edition: A P36, 778; AE P33, 772, 773, 774, 780, 788, 789; DI 773, 789, 792; F 788; TWT P34, 772, 792; WO 775, 777</p>

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<p>D.PR.08.06 Understand the difference between independent and dependent events, and recognize common misconceptions involving probability, e.g., Alice rolls a 6 on a die three times in a row; she is just as likely to roll a 6 on the fourth roll as she was on any previous roll.</p>	<p>Student Edition: P33-P36, 44 #54, 771-778, 779-784, 787-792, 796 #25-#30</p> <p>Teacher Wraparound Edition: A P36, 778; AE P33, 772, 773, 774, 780, 788, 789; DI 773, 789, 792; F 788; TWT P34, 772, 792; WO 775, 777</p>

** revised expectations in italics*