



# Algebra 1

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STANDARDS	PAGE REFERENCES
<p><b>STANDARD 4.1 (NUMBER AND NUMERICAL OPERATIONS) ALL STUDENTS WILL DEVELOP NUMBER SENSE AND WILL PERFORM STANDARD NUMERICAL OPERATIONS AND ESTIMATIONS ON ALL TYPES OF NUMBERS IN A VARIETY OF WAYS.</b></p>	
<p><b>Building upon knowledge and skills gained in preceding grades, by the end of Grade 9, students will:</b></p>	
<p><b>Number Sense</b></p>	
<p><b>Extend understanding of the number system to all numbers. – rational and irrational.</b></p>	
<p>Classify and graph <b>real</b> numbers – rational and irrational:</p>	<p><b>Student Edition:</b> 46, 47 ex 1, 50 #3, 51 #22, 52 #65, 64 #55 <i>Extra Practice Lesson 1-8 719</i> <b>Teacher Wraparound Edition:</b> AE 47; F 48</p>
<p><b>Compare and order</b> rational and irrational Numbers</p>	<p><b>Student Edition:</b> 49 ex 6, 50 ex 7, 51 #48-#55, 64 #58-#59, 65 #17-#20, 84 #57-#59 <b>Teacher Wraparound Edition:</b> AE 49, 50</p>
<p>Review <b>Absolute Value</b> of <math>n</math></p>	<p><b>Student Edition:</b> 273 #10-#15, 716 <i>Study Tip 322</i></p>

STANDARDS	PAGE REFERENCES
<p>Develop conjectures and informal proofs of <b>properties of number systems</b> and sets of numbers:</p> <p><b>a.</b> Recognize the properties of <b>identity</b></p> <p style="padding-left: 20px;"><b>Addition</b> <math>a + 0 = a</math></p> <p style="padding-left: 20px;"><b>Multiplication</b> <math>a \times 1 = a</math></p> <p><b>b.</b> Use the properties of identity</p> <p><b>c.</b> Recognize the properties of <b>equality</b></p> <p style="padding-left: 20px;"><b>Reflexive Property</b> <math>a = a</math></p> <p style="padding-left: 20px;"><b>Symmetric Property</b> If <math>a = b</math> then <math>b = a</math>.</p> <p style="padding-left: 20px;"><b>Transitive Property</b> If <math>a = b</math> and <math>b = c</math> then <math>a = c</math>.</p> <p><b>d.</b> Use the properties of equality</p> <p><b>e.</b> Use the <b>distributive</b> property to evaluate expressions <b><math>a(b + c) = ab + ac</math></b></p> <p><b>f.</b> Use the distributive property to simplify algebraic expressions</p> <p><b>g.</b> Recognize the <b>commutative</b> property</p> <p style="padding-left: 20px;"><b>Addition</b> <math>a + b = b + a</math></p> <p style="padding-left: 20px;"><b>Multiplication</b> <math>ab = ba</math></p> <p><b>h.</b> Use the commutative property to simplify algebraic expressions</p> <p><b>i.</b> Recognize the <b>associative</b> property</p> <p style="padding-left: 20px;"><b>Addition</b> <math>(a + b) + c = a + (b + c)</math></p> <p style="padding-left: 20px;"><b>Multiplication</b> <math>(ab)c = a(bc)</math></p> <p><b>j.</b> Use the associative property to simplify algebraic expressions</p>	<p><b>Student Edition:</b> 21-25, 26-31, 33-37, 46-52, 62 #36-#41, 63 #43-#50</p> <p><b>Teacher Wraparound Edition:</b> A 25, 31, 37; AE 22, 23, 27, 28, 34, 35; DI 34; F 22, 34; PA 25, 37; TNT 22</p>

STANDARDS	PAGE REFERENCES
Any number raised to the zero power (except 0) equals 1.	<b>Student Edition:</b> 368, 370 #7, 371 #21, 381 #62, 389 #8, 411 #28 <b>Teacher Wraparound Edition:</b> AE 368
Any number raised to the power of one equals itself.	<b>Student Edition:</b> <i>Reading Math 6</i> <b>Teacher Wraparound Edition:</b> I 359
To multiply terms with the same base, add the exponents.	<b>Student Edition:</b> 358-364, 411 #11-#19, 415 #8 <b>Teacher Wraparound Edition:</b> A 364, 373; AE 359, 360, 361; TNT 360
To divide terms with the same base, subtract the exponents.	<b>Student Edition:</b> 366-373, 411 #20-#30 <b>Teacher Wraparound Edition:</b> A 373; AE 367, 369
To raise a quantity to a power to another power, multiply exponents	<b>Student Edition:</b> 361 ex 5, 362 #34, 363 #58, 371 #39, 381 #64, 388 #49, 389 #3, 403 #71-#73, 411 #24, 415 #4 <i>Key Concept 359</i> <b>Teacher Wraparound Edition:</b> AE 360, 361
When a product has an exponent, each factor is raised to that power.	<b>Student Edition:</b> 360 ex 4, 361 ex 5, 362 #34, 363 #58, 371 #38, 381 #64, 388 #49, 389 #3, 403 #68-#73, 411 #24, 415 #5 <i>Key Concept 360</i> <b>Teacher Wraparound Edition:</b> AE 360, 361
When a quotient has an exponent, the numerator and denominator are raised to the Power.	<b>Student Edition:</b> 367 ex 2, 368 ex 3, 370 #4, 371 #18, 373 #61-#63, 381 #64, 389 #7, 411 #21, 415 #3 <i>Key Concept 367</i> <b>Teacher Wraparound Edition:</b> AE 367, 368
A number with a negative exponent equals its reciprocal with a positive exponent.	<b>Student Edition:</b> 368-373, 381 #62, 388 #48, 389 #9, 411 #22, 415 #7 <b>Teacher Wraparound Edition:</b> AE 369; F 368; PA 371; TNT 369

STANDARDS	PAGE REFERENCES
Review square root of numbers	<b>Student Edition:</b> 46, 47 ex 1, 50 #3, 51 #22, 52 #65, 64 #55 <i>Extra Practice Lesson 1-8 719</i> <b>Teacher Wraparound Edition:</b> AE 47; F 48
Review scientific notation	See Glencoe <i>Pre-Algebra</i> © 2008 <b>Student Edition:</b> 214-215
<b>Numerical Operations</b>	
Extend understanding and use of operations to real numbers and algebraic procedures.	<b>Student Edition:</b> 358-364, 366-373, 382-383, 384-388, 389 #20, 390-395, 396-397, 398-403, 404-409, 412 #38-#44 <b>Teacher Wraparound Edition:</b> A 364; AE 360, 361, 367, 368, 369, 385, 391, 399, 400
Develop, apply, and explain methods for solving problems involving rational and negative exponents.	<b>Student Edition:</b> 368-373, 381 #62, 388 #48, 389 #9, 411 #22, 415 #7 <i>Graphing Calculator Lab 535</i> <b>Teacher Wraparound Edition:</b> AE 369; F 368; PA 371; TNT 369
Perform operations on matrices. Addition and subtraction Scalar multiplication	See Glencoe <i>Algebra 2</i> © 2008.. <b>Student Edition:</b> 168-175
Understand and apply the laws of exponents to simplify expressions involving numbers raised to powers.	<b>Student Edition:</b> 360 ex 4, 361 ex 5, 362 #34, 363 #58, 368-373, 381 #62, 388 #48, 389 #9, 403 #68-#73, 411 #22, 415 #7 <i>Key Concept 360</i> <b>Teacher Wraparound Edition:</b> AE 360, 361, 369; F 368; PA 371; TNT 369
<b>Estimation</b>	
Recognize the limitations of estimation, assess the amount of error resulting from estimation, and determine whether the error is within acceptable tolerance limits.	<b>Student Edition:</b> 482-483 <b>Teacher Wraparound Edition:</b> AE 482, 483

STANDARDS	PAGE REFERENCES
Estimate square roots	<b>Student Edition:</b> 46, 47 ex 1, 50 #3, 51 #22, 52 #65, 64 #55 <i>Extra Practice Lesson 1-8 719</i> <b>Teacher Wraparound Edition:</b> AE 47; F 48
<b>STANDARD 4.2 (GEOMETRY AND MEASUREMENT) ALL STUDENTS WILL DEVELOP SPATIAL SENSE AND THE ABILITY TO USE GEOMETRIC PROPERTIES, RELATIONSHIPS, AND MEASUREMENT TO MODEL, DESCRIBE AND ANALYZE PHENOMENA.</b>  <b>Building upon knowledge and skills gained in preceding grades, by the end of Grade 9 students will:</b>  <b>Measuring Geometric Objects</b>  <b>Measuring Objects</b>  <b>Graphing:</b>	
	<b>Student Edition:</b> 156 ex 2, 157 ex 3, 158 #11, 159 #33-#35, 160 #53-#55, 164 #18-#20, 179 #27, 181 #20-#21, 206 ex 4, 207 #9-#10, 208 #33-#34, 212 #12, 215 ex 3, 216 #8-#9, 217 #26-#29, 224 #36-#38, 249 #10 <b>Teacher Wraparound Edition:</b> AE 156, 157, 206, 215
	<b>Student Edition:</b> 155-161, 164 #15-#16, 176 #33-#35, 179 #21-#26, 181 #14-#17, 204-209, 212 #9-#11, 218 #42-#44, 244 #27-#30, 247 #7-#10 <i>Graphing Calculator Lab 162-163</i> <b>Teacher Wraparound Edition:</b> AE 156, 157, 158, 204, 206
	<b>Student Edition:</b> 204-209, 212 #9-#11, 218 #42-#44, 244 #27-#30, 247 #7-#10 <b>Teacher Wraparound Edition:</b> AE 204, 206
Solve system of equations by graphing	<b>Student Edition:</b> 253-258, 265 #38-#40, 270 #38-#40, 271 #7, 286 #11-#15, 289 #4, 290 #4 <i>Graphing Calculator Lab 259</i> <b>Teacher Wraparound Edition:</b> AE 254, 255

STANDARDS	PAGE REFERENCES
Determine whether a system of linear equations has no, one or infinitely many solutions	<p><b>Student Edition:</b> 254 ex 1, 255 #1-#4, 256 #5-#8, 257 #32-#33, 265 #38-#40, 270 #35-#40, 271 #8-#11, 278 #40-#42, 286 #11-#14, 289 #1-#3 <i>Graphing Calculator Lab</i> 259</p> <p><b>Teacher Wraparound Edition:</b> A 258, 259; AE 254, 255, 262; F 262; PA 254</p>
Solve systems of inequalities by graphing	<p><b>Student Edition:</b> 341-345, 350 #50-#54, 351 #24, 353 #9, 364 #65-#67, 373 #64-#65</p> <p><b>Teacher Wraparound Edition:</b> A 345; AE 342, 343; DI 342; PA 345</p>
Graph absolute value equations	<p><b>Student Edition:</b> 322-327, 333 #42-#44, 339 #46-#47, 349 #34-#35 <i>Graphing Calculator Lab</i> 328</p> <p><b>Teacher Wraparound Edition:</b> A 328; AE 323, 324; DI 323; T 328; TNT 324</p>
Graph quadratic equations	<p><b>Student Edition:</b> 471-477, 480-485, 491 #50-#52, 492 #1-#3, 499 #50-#52, 518 #11-#20, 521 #1-#4, 522 #1 <i>Graphing Calculator Lab</i> 470, 478-479</p> <p><b>Teacher Wraparound Edition:</b> A 470, 477, 485; AE 472, 473, 474, 481, 482; F 473, 482; T 470, 478; TNT 472, 474</p>
Compare graphs of linear quadratics and exponential functions	<p><b>Student Edition:</b> 471-477, 480-485, 491 #50-#52, 492 #1-#3, 499 #50-#52, 518 #11-#20, 521 #1-#4, 522 #1 <i>Graphing Calculator Lab</i> 470, 478-479</p> <p><b>Teacher Wraparound Edition:</b> A 470, 477, 485; AE 472, 473, 474, 481, 482; F 473, 482; T 470, 478; TNT 472, 474</p>
Graph inverse equations	<p>Inverse Relations can be found on the following pages.</p> <p><b>Student Edition:</b> 145, 146 #5-#7, 147 #22-#27 <i>Algebra Lab</i> 145</p> <p><b>Teacher Wraparound Edition:</b> AE 145</p>

STANDARDS	PAGE REFERENCES
<p><b>STANDARD 4.3 (PATTERNS AND ALGEBRA) ALL STUDENTS WILL REPRESENT AND ANALYZE RELATIONSHIPS AMONG VARIABLE QUANTITIES AND SOLVE PROBLEMS INVOLVING PATTERNS, FUNCTIONS, AND ALGEBRAIC CONCEPTS AND PROCESSES.</b></p>	
<p><b>Building upon knowledge and skills gained in preceding grades, by the end of Grade 9, students will:</b></p>	
<p><b>Patterns</b></p>	
<p>Whenever possible use <b>models and algebraic formulas</b> to represent and analyze sequences and series:</p>	<p><b>Student Edition:</b> 165-170, 176 #30-#32, 179 #28-#33, 181 #18-#19, 195 #68-#71, 202 #57-#58</p> <p><b>Teacher Wraparound Edition:</b> AE 166, 167; BPK 166; F 167; PA 170, 176; T 165</p>
<p>Explore the <b>explicit formulas for nth terms</b></p>	<p><b>Student Edition:</b> 165-170, 176 #30-#32, 179 #28-#33, 181 #18-#19, 195 #68-#71, 202 #57-#58</p> <p><b>Teacher Wraparound Edition:</b> AE 166, 167; BPK 166; F 167; PA 170, 176; T 165</p>
<p><b>Find the sums of finite arithmetic series:</b></p>	<p>See Glencoe <i>Algebra 2</i> © 2008.</p> <p><b>Student Edition:</b> 629-635.</p>
<p><b>Functions and Relationships</b></p>	
<p><b>Representing Relations</b></p>	
<p><b>Represent relations</b> as sets of ordered pairs, tables, mappings and graphs</p>	<p><b>Student Edition:</b> 143-148, 149-154, 164 #5, 178 #11-#14, 181 #1-#2, 182 #5</p> <p><i>Algebra Lab</i> 152</p> <p><b>Teacher Wraparound Edition:</b> A 142; AE 144, 145, 150, 151; AL 145; F 146, 151; T 142</p>
<p>Find the <b>inverse</b> of a relation</p>	<p><b>Student Edition:</b> 145, 146 #5-#7, 147 #22-#27</p> <p><i>Algebra Lab</i> 145</p> <p><b>Teacher Wraparound Edition:</b> AE 145</p>
<p><b>Representing Functions</b></p>	
<p>Determine whether a relation is a function</p>	<p><b>Student Edition:</b> 149-154, 164 #12-#13, 178 #15-#16, 181 #4-#6, 182 #5</p> <p><b>Teacher Wraparound Edition:</b> AE 150, 151; F 151</p>

STANDARDS	PAGE REFERENCES
Find functional values	<b>Student Edition:</b> 150 ex 3, 151 ex 4, 152 #7-#12, 153 #27-#38, 161 #64-#66, 164 #9-#11, 178 #17-#19, 181 #7-#10 <b>Teacher Wraparound Edition:</b> AE 150, 151; TNT 151
<b>Linear Functions</b>	
Identify linear equations, intercepts, and zeros	<b>Student Edition:</b> 155-161, 164 #15-#16, 176 #33-#35, 179 #21-#26, 181 #14-#17, 204-209, 212 #9-#11, 218 #42-#44, 244 #27-#30, 247 #7-#10 <i>Graphing Calculator Lab</i> 162-163 <b>Teacher Wraparound Edition:</b> AE 156, 157, 158, 204, 206
<b>Graph</b> linear functions on grid paper	<b>Student Edition:</b> 155-161, 164 #15-#16, 176 #33-#35, 179 #21-#26, 181 #14-#17, 204-209, 212 #9-#11, 218 #42-#44, 244 #27-#30, 247 #7-#10 <i>Graphing Calculator Lab</i> 162-163 <b>Teacher Wraparound Edition:</b> AE 156, 157, 158, 204, 206
Use a <b>graphic calculator</b> to graph linear functions	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 162-163, 197, 203, 210-211 <b>Teacher Wraparound Edition:</b> A 163, 211; T 162, 210
<b>Arithmetic Sequences:</b>	
Recognize arithmetic sequences	<b>Student Edition:</b> 165-170, 176 #30-#32, 179 #28-#33, 181 #18-#19, 195 #68-#71, 202 #57-#58 <b>Teacher Wraparound Edition:</b> AE 166, 167; BPK 166; F 167; PA 170, 176; T 165
Extend and write formulas for terms of arithmetic sequences	<b>Student Edition:</b> 165-170, 176 #30-#32, 179 #28-#33, 181 #18-#19, 195 #68-#71, 202 #57-#58 <b>Teacher Wraparound Edition:</b> AE 166, 167; BPK 166; F 167; PA 170, 176; T 165

STANDARDS	PAGE REFERENCES
<b>Proportional Relationships</b>	
Use the linear function $y = kx$ to model a direct proportion	<b>Student Edition:</b> 196-202, 209 #50-#51, 212 #8, 218 #45, 243 #16-#22, 247 #6 <i>Graphing Calculator Lab</i> 197 <b>Teacher Wraparound Edition:</b> AE 196, 198, 199; PA 199
Recognize equations that do not represent a direct proportion	<b>Student Edition:</b> 577-582, 588 #51-#54, 594 #44-#47, 607 #1-#4, 623 #21, 634 #9-#11, 637 #3-#4 <i>Graphing Calculator Lab</i> 576 <b>Teacher Wraparound Edition:</b> A 576, 582; AE 578, 579; F 579; T 576, 577
<b>Modeling</b>	
Use functions to model real-world phenomena and solve problems that involve varying quantities.	<b>Student Edition:</b> 156 ex 2, 157 ex 3, 158 #11, 159 #33-#35, 160 #53-#55, 164 #18-#20, 179 #27, 181 #20-#21, 206 ex 4, 207 #9-#10, 208 #33-#34, 212 #12, 215 ex 3, 216 #8-#9, 217 #26-#29, 224 #36-#38, 249 #10 <b>Teacher Wraparound Edition:</b> AE 156, 157, 206, 215
<b>Procedures</b>	
<b>Linear Equations</b>	
<b>Equations</b>	
Translate equations into verbal sentences	<b>Student Edition:</b> 6-9, 14 #49-#52, 17 ex 4, 18 #13, 20 #61-#67, 25 #46, 32 #1-#3, 35 #10, 37 #57, 61 #8-#11, 65 #1-#3, 70-76, 90 #62 <b>Teacher Wraparound Edition:</b> A 8, 76; AE 7, 17, 71, 72, 73; DI 7, 72; F 7, 72; PA 71; T 6, 10, 15
<b>Adding and Subtracting</b>	
Solve equations by using addition	<b>Student Edition:</b> 79 ex 1, 81 #1-#3, 82 #13-#16, 83 #42, 90 #60, 131 #14, 135 #3 <i>Algebra Lab</i> 77 <b>Teacher Wraparound Edition:</b> AE 79

STANDARDS	PAGE REFERENCES
Solve equations by using subtraction	<b>Student Edition:</b> 79 ex 1, 80 ex 2-ex 4, 81 ex 5, 82 #17-#20, 83 #43, 90 #59, 97 #53, 131 #15 <i>Algebra Lab 77</i> <b>Teacher Wraparound Edition:</b> AE 79, 80, 81; I 79
<b>Multiplication and Division</b>	
Solve equations by using multiplication	<b>Student Edition:</b> 85 ex 1, 86 ex 2, 88 #1-#6, 89 #37, 97 #51, 132 #21-#22, 135 #8 <b>Teacher Wraparound Edition:</b> A 84; AE 86; F 86
Solve equations by using division	<b>Student Edition:</b> 86 ex 2, 87 ex 4, 88 #8-#11, 89 #41-#43, 97 #50, 132 #23-#24, 135 #5 <b>Teacher Wraparound Edition:</b> AE 86, 87; F 87
<b>Multi-step Equations:</b>	
Solve equations involving <b>more than one operation</b>	<b>Student Edition:</b> 48 #48-#50, 92-97, 103 #51-#53, 104 #18-#20, 110 #46-#48, 132 #28-#31, 135 #9 <i>Algebra Lab 91</i> <b>Teacher Wraparound Edition:</b> A 91; AE 93, 94; F 94; PA 94; T 91; TNT 93
Write and solve equations involving consecutive integers	<b>Student Edition:</b> 94 ex 4, 95 #25-#28, 132 #33 <b>Teacher Wraparound Edition:</b> AE 94; PA 71
<b>Two Sided Equations</b>	
Solve equations with variable on each side	<b>Student Edition:</b> 98-103, 110 #43-#45, 104 #21, 133 #35-#36, 135 #12-#13 <b>Teacher Wraparound Edition:</b> A 103; AE 99, 100; I 100; TNT 100
Solve equations involving grouping symbols	<b>Student Edition:</b> 98-103, 110 #43-#45, 104 #21, 133 #35-#36, 135 #12-#13 <b>Teacher Wraparound Edition:</b> A 103; AE 99, 100; I 100; TNT 100

STANDARDS	PAGE REFERENCES
<b>Specific Equations:</b>	
Solve literal equations for a specific variable (e.g. If $d = rt$ , what is $t$ )	<b>Student Edition:</b> 117-121, 128 #42-#43, 134 #44-#48, 135 #22-#23 <b>Teacher Wraparound Edition:</b> A 121; AE 118, 119; F 119; TNT 118
Use formulas to solve real-world problems	<b>Student Edition:</b> 117-121, 128 #42-#43, 134 #44-#48, 135 #22-#23 <b>Teacher Wraparound Edition:</b> A 121; AE 118, 119; F 119; TNT 118
<b>Analyzing Linear Equations</b>	
<b>Rate of Change and Slope</b>	
Use rate of change to solve problems	<b>Student Edition:</b> 187 ex 1, 188 ex 2, 192 #3-#5, 193 #18-#19, 194 #51-#53, 199 ex 4, 200 #9-#11, 209 #55, 212 #3-#5, 243 #15, 247 #6 <i>Algebra Lab 86</i> <b>Teacher Wraparound Edition:</b> AE 188, 189, 199; PA 195
Use the formula for slope	<b>Student Edition:</b> 187-195, 196-202, 209 #52-#54, 212 #6, 243 #13-#14, 247 #5 <i>Algebra Lab 186</i> <i>Graphing Calculator Lab 203</i> <b>Teacher Wraparound Edition:</b> A 195; AE 188, 189, 190, 191, 197, 198; F 190, 191; I 190; {A 195; TNT 190
<b>Slope and Direct Variation</b>	
Write and graph direct variation equations	<b>Student Edition:</b> 196-202, 209 #50-#51, 212 #8, 218 #45, 243 #16-#22, 247 #6 <i>Graphing Calculator Lab 197</i> <b>Teacher Wraparound Edition:</b> AE 196, 198, 199; PA 199
Solve problems involving direct variations	<b>Student Edition:</b> 196-202, 209 #50-#51, 212 #8, 218 #45, 243 #16-#22, 247 #6 <i>Graphing Calculator Lab 197</i> <b>Teacher Wraparound Edition:</b> AE 196, 198, 199; PA 199

STANDARDS	PAGE REFERENCES
<b>Graphing Equations in Slope-Intercept Form</b>	
Write and graph linear equations in slope-intercept form	<p><b>Student Edition:</b> 204-209, 212 #9-#11, 213-218, 244 #23-#31, 245 #45-#46, 247 #7-#10, 249 #7 <i>Graphing Calculator Lab</i> 210-211</p> <p><b>Teacher Wraparound Edition:</b> A 209, 211; AE 205, 206, 214; DI 206; F 206; I 214; PA 209, 215</p>
<b>Writing Equations in Point-Slope Form</b>	
Write equation of a line given the slope and one point of a line	<p><b>Student Edition:</b> 214 ex 2, 215 ex 3, 216 #4-#6, 217 #18-#25, 218 #40, 220-225, 233 #38-#40, 241 #39-#41, 244 #32-#38, 245 #40-#42</p> <p><b>Teacher Wraparound Edition:</b> A 225; AE 214, 215, 221, 222; F 215, 222; I 215; PA 215, 225</p>
Write an equation of a line given two points on the line	<p><b>Student Edition:</b> 214 ex 2, 215 ex 3, 216 #4-#6, 217 #18-#25, 218 #40, 220-225, 233 #38-#40, 241 #39-#41, 244 #32-#38, 245 #40-#42</p> <p><b>Teacher Wraparound Edition:</b> A 225; AE 214, 215, 221, 222; F 215, 222; I 215; PA 215, 225</p>
<b>Solving Linear Inequalities</b>	
<b>Solving Inequalities by Addition and Subtraction</b>	
Solve linear inequalities by using addition	<p><b>Student Edition:</b> 294 ex 1, 297 #1-#2, 298 #40, 307 #58, 313 #57, 321 #3, 347 #11-#12, 351 #1</p> <p><b>Teacher Wraparound Edition:</b> AE 295; F 296</p>
Solve linear inequalities by using subtraction	<p><b>Student Edition:</b> 295 ex 2, 296 ex 4, 297 #3-#4, 298 #37, 307 #59, 313 #56, 321 #2, 347 #13, 351 #2</p> <p><b>Teacher Wraparound Edition:</b> AE 296, 297; F 296</p>

STANDARDS	PAGE REFERENCES
<b>Solving Inequalities by Multiplication and Division</b>	
Solve linear inequalities by using multiplication	<p><b>Student Edition:</b> 302 ex 1, 303 ex 2, 305 #1-#4, 306 #35, 320 #57, 321 #11, 347 #18 <i>Algebra Lab</i> 300 <i>Key Concept</i> 301, 302</p> <p><b>Teacher Wraparound Edition:</b> A 300, 307; AE 302, 303</p>
Solve linear inequalities by using division	<p><b>Student Edition:</b> 304 ex 3-ex 4, 305 #8-#11, 306 #38, 307 #54, 320 #55-#56, 321 #13, 347 #17 <i>Algebra Lab</i> 300 <i>Key Concept</i> 301, 302</p> <p><b>Teacher Wraparound Edition:</b> A 300, 307; AE 304; TNT 304</p>
<b>Solving Multi-Step Inequalities</b>	
Solve linear inequalities involving more than one operation	<p><b>Student Edition:</b> 308-313, 321 #16-#21, 327 #53-#55, 348 #23-#26, 351 #3</p> <p><b>Teacher Wraparound Edition:</b> A 313; AE 309, 310</p>
Solve linear inequalities involving the <b>Distributive Property</b>	<p><b>Student Edition:</b> 310 ex 4, 311 #7-#9, 312 #32-#33, 321 #18, 348 #26, 351 #4</p> <p><b>Teacher Wraparound Edition:</b> A 313; AE 310</p>
<b>Solving Compound Inequalities</b>	
Solve a system of compound inequalities containing the word “and” and graph its solution set	<p><b>Student Edition:</b> 315 ex 1, 316 ex 2, 318 #14-#15, 319 #46, 321 #27, 348 #29, 351 #8, 364 #72</p> <p><b>Teacher Wraparound Edition:</b> AE 316; F 316; I 316; TNT 317</p>
Solve compound inequalities containing the word or – and graph their solution sets	<p><b>Student Edition:</b> 317 ex 4, 318 #16-#17, 319 #46, 321 #28, 348 #30, 351 #9, 364 #70</p> <p><b>Teacher Wraparound Edition:</b> AE 317; I 316; TNT 317</p>

STANDARDS	PAGE REFERENCES
<b>Solving Open Sentences Involving Absolute Value</b>	
Solve absolute value equations in one variable	<b>Student Edition:</b> 322-327, 333 #42-#44, 339 #46-#47, 349 #34-#35 <i>Graphing Calculator Lab</i> 328 <b>Teacher Wraparound Edition:</b> A 328; AE 323, 324; DI 323; T 328; TNT 324
Graph absolute value functions	<b>Student Edition:</b> 322-327, 333 #42-#44, 339 #46-#47, 349 #34-#35 <i>Graphing Calculator Lab</i> 328 <b>Teacher Wraparound Edition:</b> A 328; AE 323, 324; DI 323; T 328; TNT 324
<b>Solving Inequalities Involving Absolute Value</b>	
Solve absolute value inequalities	<b>Student Edition:</b> 329-333, 339 #44-#45, 345 #44, 349 #38-#44, 351 #12-#13 <b>Teacher Wraparound Edition:</b> AE 330, 331; F 330; PA 333; TNT 330
<b>Graphing Inequalities in Two Variables</b>	
Graph inequalities on the coordinate plane	<b>Student Edition:</b> 334-339, 345 #41-#43, 350 #45-#49, 351 #18-#20 <i>Graphing Calculator Lab</i> 340 <b>Teacher Wraparound Edition:</b> A 340; AE 335, 336; F 336
Solve real-world problems involving linear inequalities	<b>Student Edition:</b> 336 ex 2, 337 #7, 338 #35-#36, 350 #49, 351 #17, 352 #2, 353 #10 <i>Get Ready</i> 334 <b>Teacher Wraparound Edition:</b> AE 336
<b>Graphing Inequalities</b>	
Solve systems of inequalities by graphing	<b>Student Edition:</b> 341-345, 350 #50-#54, 351 #24, 353 #9 <b>Teacher Wraparound Edition:</b> A 345; AE 342, 343; DI 342; PA 345

STANDARDS	PAGE REFERENCES
Solve real-world problems involving systems of inequalities	<b>Student Edition:</b> 342 ex 2, 343 #5-#6, 344 #28-#29, 350 #54, 351 #21 <i>Get Ready</i> 341 <b>Teacher Wraparound Edition:</b> AE 343
<b>Monomials and Polynomials</b>	
<b>Monomials</b>	
Multiply monomials	<b>Student Edition:</b> 358-364, 411 #11-#19, 415 #8 <b>Teacher Wraparound Edition:</b> A 364, 373; AE 359, 360, 361; TNT 360
Simplify expressions involving powers of monomials	<b>Student Edition:</b> 361 ex 5, 362 #34, 363 #58, 371 #39, 381 #64, 388 #49, 389 #3, 403 #71-#73, 411 #24, 415 #4 <i>Key Concept</i> 359 <b>Teacher Wraparound Edition:</b> AE 360, 361
<b>Dividing Monomials</b>	
Simplify expressions involving the quotient of monomials	<b>Student Edition:</b> 366-373, 411 #20-#30 <b>Teacher Wraparound Edition:</b> A 373; AE 367, 369
Simplify expressions containing negative exponents	<b>Student Edition:</b> 368-373, 381 #62, 388 #48, 389 #9, 411 #22, 415 #7 <b>Teacher Wraparound Edition:</b> AE 369; F 368; PA 371; TNT 369
<b>Polynomials</b>	
Find the degree of a polynomial	<b>Student Edition:</b> 377 ex 3, 379 #5-#7, 380 #57, 388 #43-#46, 389 #12-#15, 412 #31-#34, 415 #9-#10 <b>Teacher Wraparound Edition:</b> A 381; AE 377; TNT 377
Arrange the terms of a polynomial in ascending and descending order	<b>Student Edition:</b> 378 ex 4, 379 #8-#11, 380 #42-#49, 389 #18-#19, 412 #35-#36, 415 #9-#10 <b>Teacher Wraparound Edition:</b> AE 378

STANDARDS	PAGE REFERENCES
Adding and Subtracting Polynomials	<b>Student Edition:</b> 384-388, 389 #20, 395 #68-#71, 403 #58, 412 #38-#44, 415 #11-#12 <i>Algebra Lab</i> 382-383 <b>Teacher Wraparound Edition:</b> A 383, 388; AE 385; PA 388; T 382, 384; TNT 385
Use algebra tiles to add and subtract polynomials	<b>Student Edition:</b> <i>Algebra Lab</i> 382-383 <b>Teacher Wraparound Edition:</b> A 383; T 383
<b>Adding and Subtracting Polynomials</b>	
Use algebra tiles to add polynomials	<b>Student Edition:</b> <i>Algebra Lab</i> 382-383 <b>Teacher Wraparound Edition:</b> A 383; T 383
Use algebra tiles to subtract polynomials	<b>Student Edition:</b> <i>Algebra Lab</i> 382-383 <b>Teacher Wraparound Edition:</b> A 383; T 383
<b>Multiplying a Polynomial by a Monomial</b>	
Find the product of a monomial and a polynomial	<b>Student Edition:</b> 390-395, 403 #56-#57, 413 #45-#48, 415 #17 <b>Teacher Wraparound Edition:</b> A 395; AE 391; F 391; I 392; PA 395; T 390; TNT 392
Solve equations involving polynomials	<b>Student Edition:</b> 391 ex 4, 392 #12-#15, 393 #36-#41, 409 #61-#64, 413 #49-#50, 415 #21-#22, 443 ex 3, 480-485, 486-491, 493-499 <b>Teacher Wraparound Edition:</b> AE 391, 443, 481, 482, 483, 487, 488, 494, 495; PA 485
<b>Multiply Polynomials</b>	
Multiply two binomials by using the FOIL method	<b>Student Edition:</b> 399 ex 2, 400 ex 3, 401 #1-#6, 409 #55-#58, 413 #52-#55, 415 #19 <i>Key Concept</i> 399 <b>Teacher Wraparound Edition:</b> A 403; AE 399, 400

STANDARDS	PAGE REFERENCES
Multiply two polynomials by using the Distributive Property	<b>Student Edition:</b> 398 ex 1, 400 ex 4, 401 #8-#11, 402 #34-#39, 409 #59-#60, 413 #56-#57, 415 #20 <b>Teacher Wraparound Edition:</b> AE 399, 400; F 399; I 399
<b>Factoring</b>	
<b>Monomials and Factoring</b>	
Find prime factorization of monomials	<b>Student Edition:</b> 420-424, 431 #47-#49, 439 #54-#56, 440 #1-#4, 462 #11-#14, 465 #1-#2 <b>Teacher Wraparound Edition:</b> A 424; AE 421, 422; F 421; I 427; PA 421; TNT421
Find the greatest common factors of monomials	<b>Student Edition:</b> 420-424, 431 #47-#49, 439 #54-#5, 440 #6-#9, 462 #15-#20, 465 #3-#6, 466 #2 <b>Teacher Wraparound Edition:</b> A 424; AE 421, 422; F 421; I 427; PA 421; TNT421
<b>Factoring Using the Distributive Property</b>	
Use algebraic tiles to model using the Distribute Property	<b>Student Edition:</b> <i>Algebra Lab</i> 425 <b>Teacher Wraparound Edition:</b> A 425; T 425
Solve quadratic equations of the form $ax^2 + bx = 0$	<b>Student Edition:</b> 428 ex 4, 429 #5-#7, 430 #21-#28, 440 #16, 462 #28-#29, 464 #25 <b>Teacher Wraparound Edition:</b> AE 428
<b>Factoring Trinomials</b>	
Use algebra tiles to model factoring trinomials	<b>Student Edition:</b> 466 #5 <i>Algebra Lab</i> 432-433 <b>Teacher Wraparound Edition:</b> A 433; I 435; T 432
Factor trinomials of the form $ax^2 + bx + c$	<b>Student Edition:</b> 434-439, 440 #21-#24, 441-446, 452 #42-#44, 463 #39-#42, 464 #7-#12 <b>Teacher Wraparound Edition:</b> A 439; AE 435, 436, 442, 443; DI 442; F 435; TNT 437, 442

STANDARDS	PAGE REFERENCES
Solve equations of the form $ax^2 + bx + c = 0$	<b>Student Edition:</b> 436 ex 4, 437 ex 5, 438 #24-#31, 440 #25-#28, 443 ex 3, 444 ex 4, 445 #23-#30, 446 #49-#51, 452 #45-#47, 460 #55-#60, 463 #43-#44, 464 #26-#27, 467 #11 <b>Teacher Wraparound Edition:</b> AE 436, 437, 443; I 443; PA 446; TNT 436, 443
<b>Factoring Differences of Squares</b>	
Factor binomials that are differences of squares	<b>Student Edition:</b> 447-452, 460 #53-#54, 464 #46-#49, 465 #15 <b>Teacher Wraparound Edition:</b> A 452; AE 448, 449; F 449; I 449; TNT 448, 449
Solve equations involving the differences of squares	<b>Student Edition:</b> 449 ex 4, 450 #7-#9, 451 #11-#22, 452 #40 <b>Teacher Wraparound Edition:</b> AE 449, 450; PA 452
<b>Perfect Squares and Factoring</b>	
Factor perfect square trinomials	<b>Student Edition:</b> 454-460, 464 #55-#58, 465 #16 <b>Teacher Wraparound Edition:</b> AE 456, 457; I 457; TNT 456
Solve equations involving perfect square trinomials	<b>Student Edition:</b> 456 ex 3, 457 ex 4, 458 #7-#10, 459 #24-#33, 464 #59-#62, 465 #26 <b>Teacher Wraparound Edition:</b> AE 456, 457; I 457; TNT 456
<b>Quadratic and Exponential Functions</b>	
<b>Graphing Quadratic Function</b>	
Use a graphing calculator to graph quadratic functions	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 470, 478-479 <b>Teacher Wraparound Edition:</b> A 470, 479; T 470, 478
Find the equation of the axis of symmetry and the coordinates of the vertex of a parabola	<b>Student Edition:</b> 471-477, 492 #1-#3 <i>Graphing Calculator Lab</i> 478-479 <b>Teacher Wraparound Edition:</b> A 477, 479; AE 472, 473; F 473; I 474; T 478

STANDARDS	PAGE REFERENCES
<b>Solving Quadratic Equations by Graphing</b>	
Solve quadratic equations by graphing	<b>Student Edition:</b> 480-485, 492 #5-#7, 499 #50-#52, 518 #21-#27, 521 #5-#8 <b>Teacher Wraparound Edition:</b> AE 481, 482, 483; DI 481; F 482; TNT 481
Estimate solutions of quadratic equations by graphing	<b>Student Edition:</b> 480-485, 492 #5-#7, 499 #50-#52, 518 #21-#27, 521 #5-#8 <b>Teacher Wraparound Edition:</b> AE 481, 482, 483; DI 481; F 482; TNT 481
<b>Solving Quadratic Equations by the Quadratic Formula</b>	
Solve quadratic equations by using the quadratic formula	<b>Student Edition:</b> 493-499, 519 #34-#40, 521 #16-#17 <b>Teacher Wraparound Edition:</b> A 499; AE 494, 495; F 494; I 495
Use the discriminate to determine the number of solutions for a quadratic equation	<b>Student Edition:</b> 496 ex 3, 497 #6-#8, 498 #35-#36 <b>Teacher Wraparound Edition:</b> AE 496; TNT 496
Apply quadratic equations to real world problems	<b>Student Edition:</b> 495 ex 2, 497 #5, 498 #39, 519 #40, 523 #12 <i>Algebra Lab</i> 500-501 <b>Teacher Wraparound Edition:</b> A 501; AE 495; T 500
<b>Exponential Functions</b>	
Graph exponential functions	<b>Student Edition:</b> 502-508, 514 #21-#23, 520 #41-#45, 521 #19-#23 <i>Algebra Lab</i> 509 <b>Teacher Wraparound Edition:</b> A 509; AE 503, 504, 505; F 503; I 504; TNT 503
Identify data that displays exponential behavior	<b>Student Edition:</b> <i>Algebra Lab</i> 509 <i>Graphing Calculator Lab</i> 515-516 <b>Teacher Wraparound Edition:</b> A 509; F 511; T 509

STANDARDS	PAGE REFERENCES
Solve problems involving exponential growth	<b>Student Edition:</b> 510 ex 1, 511 ex 2, 512 #3, 513 #7, 514 #16, 520 #50-#51, 521 #25 <b>Teacher Wraparound Edition:</b> A 514; AE 511
Solve problems involving exponential decay	<b>Student Edition:</b> 512 ex 3, 513 #11, 514 #16, 521 #24 <b>Teacher Wraparound Edition:</b> A 514; AE 512
<b>Radical Expressions and Triangles</b>	
<b>Simplifying Radical Expressions</b>	
Simplify radical expressing using the product property of square roots	<b>Student Edition:</b> 528-534, 540 #52-#53, 546 #73, 548 #1, 554 #56, 568 #10, 571 #6 <b>Teacher Wraparound Edition:</b> AE 529; I 529; TNT 529
Simplify radical expressions using the quotient property of square roots	<b>Student Edition:</b> 530 ex 4, 532 #11-#12, 540 #54-#56, 554 #58, 568 #14, 571 #2 <b>Teacher Wraparound Edition:</b> A 534; AE 530; F 530; TNT 530
<b>Operations with Square Roots</b>	
Add and subtract square roots	<b>Student Edition:</b> 536 ex 1, 537 ex 2, 538 #1-#6, 539 #34-#37, 540 #46, 546 #70-#72, 548 #9-#10, 554 #57, 568 #16-#19, 571 #1 <b>Teacher Wraparound Edition:</b> A 540; AE 537; F 537
Multiply square roots	<b>Student Edition:</b> 537 ex 3, 538 #7-#8, 539 #31, 546 #74, 549 #11, 571 #5 <b>Teacher Wraparound Edition:</b> A 540; AE 537
Solve problems using square roots	<b>Student Edition:</b> 541-546, 548 #15-#17, 554 #53-#55, 559 #50-#52, 569 #24-#30, 571 #7-#12 <i>Graphing Calculator Lab 547</i> <b>Teacher Wraparound Edition:</b> AE 542; F 543; PA 546

STANDARDS	PAGE REFERENCES
Solve square roots with extraneous solutions	<b>Student Edition:</b> 542 ex 3, 543 #2, 544 #18, 569 #24, 571 #10 <b>Teacher Wraparound Edition:</b> AE 542; F 543
Use a graphing calculator to explore graphs of square roots	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 547 <b>Teacher Wraparound Edition:</b> A 547; T 547
<b>The Pythagorean Theorem</b>	
Solve problems by using the Pythagorean theorem	<b>Student Edition:</b> 549-554, 559 #47-#49, 565 #40-#42, 569 #31-#41, 571 #13-#14, 572 #5, 573 #10 <b>Teacher Wraparound Edition:</b> AE 550, 551; F 551; PA 551; TNT 550
Determine whether a triangle is a right angle	<b>Student Edition:</b> 551 ex 4, 552 #8-#9, 565 #40-#42, 569 #37-#40 <b>Teacher Wraparound Edition:</b> AE 551; PA 551
<b>Distance Formula – based on the Pythagorean Theorem</b>	
Find the distance between two points on the coordinate plane	<b>Student Edition:</b> 555-559, 565 #37-#39, 570 #42-#45, 571 #17-#19, 573 #12 <b>Teacher Wraparound Edition:</b> A 559; AE 556; F 556; PA 559; TNT 556
Find the point that is a given distance from the second point on a plane	<b>Student Edition:</b> 557 #8-#9, 558 #24-#29, 570 #46-#47 <b>Teacher Wraparound Edition:</b> AE 556
<b>Similar Triangles</b>	
Determine whether two triangles are similar	<b>Student Edition:</b> 560-565, 570 #49-#53, 571 #20-#23 <b>Teacher Wraparound Edition:</b> A 565; AE 561, 562; F 562; T 560; TNT 561
Find the unknown measures of sides of two similar triangles	<b>Student Edition:</b> 560-565, 570 #49-#53, 571 #20-#23, 572 #7, 582 #44-#45, 588 #55-#56 <b>Teacher Wraparound Edition:</b> AE 561, 562; DI 562; F 562; PA 565; TNT 561

STANDARDS	PAGE REFERENCES
<b>Rational Expressions and Equations</b>	
<b>Inverse Variation</b>	
Use a graphing calculator to graph inverse variations	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 576, 589 <b>Teacher Wraparound Edition:</b> A 589
Solve problems involving inverse variations	<b>Student Edition:</b> 577-582, 588 #51-#54, 594 #44-#47, 607 #1-#4, 623 #21, 634 #9-#11, 637 #3-#4 <i>Graphing Calculator Lab</i> 576 <b>Teacher Wraparound Edition:</b> A 576, 582; AE 578, 579; F 579; T 576, 577
<b>Rational Expressions</b>	
Identify values excluded from the domain of a rational expression	<b>Student Edition:</b> 583 ex 1, 585 ex 4, 586 #1-#3, 587 #22-#39, 594 #41-#43, 607 #6-#9 <i>Graphing Calculator Lab</i> 589 <b>Teacher Wraparound Edition:</b> A 589; AE 584, 585; F 585; I 584; PA 585; T 589
Simplify rational expressions	<b>Student Edition:</b> 583-588, 589 #4, 599 #45-#48, 600 #7-#12, 607 #10-#13, 634 #12-#17, 637 #6-#11, 662 #62-#64 <b>Teacher Wraparound Edition:</b> AE 585
<b>Multiply Rational Expressions</b>	
Multiply rational expressions	<b>Student Edition:</b> 590-594, 599 #42-#44, 606 #65-#66, 607 #15-#20, 634 #18-#22, 637 #15 <b>Teacher Wraparound Edition:</b> AE 591; PA 594
Use dimensional analysis with multiplication	<b>Student Edition:</b> 591 ex 3, 592 #8, 593 #26-#29, 594 #39, 606 #67, 607 #21 <b>Teacher Wraparound Edition:</b> AE 591; F 591

STANDARDS	PAGE REFERENCES
<b>Dividing Rational Expressions</b>	
Divide rational expression	<b>Student Edition:</b> 595-599, 606 #63-#64, 607 #23-#30, 613 #44-#47, 635 #23-#26, 637 #16, 670 #56-#57 <b>Teacher Wraparound Edition:</b> AE 596; F 597; PA 599
Use dimensional analysis with division	<b>Student Edition:</b> 596 ex 3, 597 #9, 598 #28-#29, 607 #31, 635 #27 <b>Teacher Wraparound Edition:</b> AE 596
<b>Rational Expressions with Like Denominators</b>	
Add rational expressions with like denominators	<b>Student Edition:</b> 608-613, 619 #58-#60, 635 #33-#35 <b>Teacher Wraparound Edition:</b> A 613; AE 613; F 609
Subtract rational expressions with like denominators	<b>Student Edition:</b> 608-613, 625 #47-#49, 635 #36-#38, 637 #12 <b>Teacher Wraparound Edition:</b> A 613; AE 610; F 610; I 610; PA 613
<b>Rational Expressions with Unlike Denominators</b>	
Add rational expressions with unlike denominators	<b>Student Edition:</b> 614-619, 625 #44-#46, 636 #39-#40, 637 #18, 654 #32-#33 <b>Teacher Wraparound Edition:</b> AE 615; DI 616; F 615
Subtract rational expressions with unlike denominators	<b>Student Edition:</b> 614-619, 632 #49-#51, 636 #41-#42 <b>Teacher Wraparound Edition:</b> AE 616; DI 616; F 616; PA 619
<b>Mixed Expressions and Complex Fractions</b>	
Simplify mixed expressions	<b>Student Edition:</b> 620-625, 632 #46-#48, 636 #43-#46, 637 #9-#11, 648 #37-#39 <b>Teacher Wraparound Edition:</b> A 625; AE 621, 622; F 621; PA 625; TNT 622

STANDARDS	PAGE REFERENCES
Simplify complex fractions	<b>Student Edition:</b> 620-625, 632 #46-#48, 636 #43-#46, 637 #9-#11, 648 #37-#39 <b>Teacher Wraparound Edition:</b> A 625; AE 621, 622; F 621; PA 625; TNT 622
<b>Rational Equations and Functions</b>	
Solve rational equations	<b>Student Edition:</b> 626-632, 636 #47-#51, 637 #20-#21, 648 #34-#36, 654 #29-#31 <b>Teacher Wraparound Edition:</b> AE 627, 629; F 629; PA 632; TNT 629
Eliminate extraneous solutions	<b>Student Edition:</b> 626-632, 636 #47-#51, 637 #20-#21, 648 #34-#36, 654 #29-#31 <b>Teacher Wraparound Edition:</b> AE 627, 629; F 629; PA 632; TNT 629
<b>STANDARD 4.4 (DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE CONCEPTS AND TECHNIQUES OF DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS, AND WILL USE THEM TO MODEL SITUATIONS, SOLVE PROBLEMS, AND ANALYZE AND DRAW APPROPRIATE INFERENCES FROM DATA.</b>	
<b>Building upon knowledge and skills gained in preceding grades, by the end of Grade 9, students will:</b>	
<b>Data Analysis</b>	
<b>Review, use and maintain NJ standards on data analysis in and through the use of real world problems from the students' world.</b>	
<b>Slope-Intercept Form</b>	
Model real world data with an equation in slope-intercept form	<b>Student Edition:</b> 206 ex 4, 208 #35-#36, 215 ex 3, 216 #8-#9, 217 #26-#29 <i>Graphing Calculator Lab</i> 203 <b>Teacher Wraparound Edition:</b> AE 206; 215
<b>Scatter Plots and Lines of Fit</b>	
Interpret points on a scatter plot	<b>Student Edition:</b> 227-233, 241 #38, 246 #48-#52, 247 #21-#25, 258 #48, 265 #41 <i>Graphing Calculator Lab</i> 234-235 <b>Teacher Wraparound Edition:</b> A 235; AE 228, 229, 230; F 229; PA 233; T 227; TNT 230

STANDARDS	PAGE REFERENCES
Use lines of fit to make and evaluate predictions	<p><b>Student Edition:</b> 227-233, 241 #38, 246 #48-#52, 247 #21-#25, 258 #48, 265 #41 <i>Graphing Calculator Lab</i> 234-235</p> <p><b>Teacher Wraparound Edition:</b> A 235; AE 228, 229, 230; F 229; PA 233; T 227; TNT 230</p>
Identify data that displays exponential behavior	<p><b>Student Edition:</b> 502-508 <i>Algebra Lab</i> 509 <i>Graphing Calculator Lab</i> 515-516</p> <p><b>Teacher Wraparound Edition:</b> A 508; AE 503, 504, 505; F 504</p>
<b>Direct Variation</b>	
Write equations of direct variations	<p><b>Student Edition:</b> 196-202, 209 #50-#51, 212 #8, 218 #45, 243 #16-#22, 247 #6 <i>Graphing Calculator Lab</i> 197</p> <p><b>Teacher Wraparound Edition:</b> AE 196, 198, 199; PA 199</p>
Use ratio and proportion with direct variation	<p><b>Student Edition:</b> 105-110, 115 #45-#47, 121 #42-#44, 133 #38-#40, 135 #16-#19 <i>Reading Math</i> 116</p> <p><b>Teacher Wraparound Edition:</b> A 110; AE 106, 107; F 107; I 106</p>
<b>Data Display:</b>	
Choose the best fit linear, quadratic or exponential model for data display: Tables, box and whisker plot, spreadsheets, line plots, bar graphs, histograms, line graphs, circle graphs...	<p><b>Student Edition:</b> 227-233, 241 #38, 246 #48-#52, 247 #21-#25, 258 #48, 265 #41, 515-516 <i>Graphing Calculator Lab</i> 234-235</p> <p><b>Teacher Wraparound Edition:</b> A 235; AE 228, 229, 230; F 229; PA 233; T 227; TNT 230</p>

STANDARDS	PAGE REFERENCES
<p><b>STANDARD 4.5 (MATHEMATICAL PROCESSES) ALL STUDENTS WILL USE MATHEMATICAL PROCESSES OF PROBLEM SOLVING, COMMUNICATION, CONNECTIONS, REASONING, REPRESENTATIONS, AND TECHNOLOGY TO SOLVE PROBLEMS AND COMMUNICATE MATHEMATICAL IDEAS.</b></p>	
<p><b>At each grade level, with respect to content appropriate for that grade level, students will:</b></p>	
<p><b>A. Problem Solving</b></p>	
<p>Learn mathematics through problem solving, inquiry, and discovery.</p>	<p><b>Student Edition:</b>  <i>Algebra Lab</i> 77, 91, 142, 186, 300, 365, 375, 382-383, 425, 432-433, 509  <i>Graphing Calculator Lab</i> 162-163, 203, 210-211, 234-235, 259, 535, 589</p>
<p>Solve problems that arise in mathematics and in other contexts – workplace readiness</p> <ul style="list-style-type: none"> <li>• Open-ended problems</li> <li>• Non-routine problems</li> <li>• Problems with multiple solutions</li> <li>• Problems that can be solved in several ways</li> </ul>	<p><b>Student Edition:</b>  90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b>  AE 107, 113, 123, 262; PA 112</p>
<p>Select and apply a variety of appropriate problem-solving strategies (e.g., try a simpler problem or make a diagram) to solve problems.</p>	<p><b>Student Edition:</b>  90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b>  AE 107, 113, 123, 262; PA 112</p>
<p>Pose problems of various types and levels of difficulty.</p>	<p><b>Student Edition:</b>  90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b>  AE 107, 113, 123, 262; PA 112</p>
<p>Monitor students' progress and reflect on the process of their problem-solving activity.</p>	<p><b>Student Edition:</b>  90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b>  AE 107, 113, 123, 262; PA 112</p>

STANDARDS	PAGE REFERENCES
<b>B. Communication</b>	
<p>Use communication to organize and clarify their mathematical thinking.</p> <ul style="list-style-type: none"> <li>• Reading and writing</li> <li>• Discussion, listening, and questioning</li> </ul>	<p><b>Student Edition:</b>  14 #46, 19 #52, 25 #39, 31 #47, 37 #47, 44 #46, 52 #68, 58 #29, 76 #49, 83 #52, 90 #56, 96 #46, 102 #48, 110 #40, 115 #42, 121 #38, 128 #39, 148 #36, 154 #53, 160 #60</p>
<p>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others, both orally and in writing.</p>	<p><b>Student Edition:</b>  14 #46, 19 #52, 25 #39, 31 #47, 37 #47, 44 #46, 52 #68, 58 #29, 76 #49, 83 #52, 90 #56, 96 #46, 102 #48, 110 #40, 115 #42, 121 #38, 128 #39, 148 #36, 154 #53, 160 #60</p>
<p>Analyze and evaluate the mathematical thinking and strategies of others.</p>	<p><b>Student Edition:</b>  13 #43, 30 #45, 90 #55, 115 #41, 170 #48, 195 #62, 224 #50, 264 #31, 277 #30, 307 #54, 326 #47, 363 #60, 373 #54, 439 #43, 446 #42, 451 #37, 498 #41, 507 #43, 545 #65, 564 #30</p>
<p>Use the language of mathematics to express mathematical ideas precisely.</p>	<p><b>Student Edition:</b>  14 #46, 19 #52, 25 #39, 31 #47, 37 #47, 44 #46, 52 #68, 58 #29, 76 #49, 83 #52, 90 #56, 96 #46, 102 #48, 110 #40, 115 #42, 121 #38, 128 #39, 148 #36, 154 #53, 160 #60</p>
<b>C. Connections</b>	
<p>Recognize recurring themes across mathematical domains (e.g., patterns in number, algebra, and geometry).</p>	<p><b>Student Edition:</b>  <i>Algebra Lab</i> 77, 91, 142, 186, 300, 365, 375, 382-383, 425, 432-433, 509  <i>Graphing Calculator Lab</i> 162-163, 203, 210-211, 234-235, 259, 535, 589</p>
<p>Use connections among mathematical ideas to explain concepts (e.g., two linear equations have a unique solution because the lines they represent intersect at a single point).</p>	<p><b>Student Edition:</b>  <i>Algebra Lab</i> 77, 91, 142, 186, 300, 365, 375, 382-383, 425, 432-433, 509  <i>Graphing Calculator Lab</i> 162-163, 203, 210-211, 234-235, 259, 535, 589</p>
<p>Recognize that mathematics is used in a variety of contexts outside of mathematics.</p>	<p><b>Student Edition:</b>  90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b>  AE 107, 113, 123, 262; PA 112</p>

STANDARDS	PAGE REFERENCES
Apply mathematics in practical situations and in other disciplines.	<b>Student Edition:</b> 90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7 <b>Teacher Wraparound Edition:</b> AE 107, 113, 123, 262; PA 112
Trace the development of mathematical concepts over time and across cultures (cf. world languages and social studies standards).	<b>Student Edition:</b> 81 #12, 95 #8
Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.	<b>Student Edition:</b> <i>Algebra Lab</i> 77, 91, 142, 186, 300, 365, 375, 382-383, 425, 432-433, 509 <i>Graphing Calculator Lab</i> 162-163, 203, 210-211, 234-235, 259, 535, 589
<b>D. Reasoning</b>	
Recognize that mathematical facts, procedures, and claims must be justified.	<b>Student Edition:</b> 39-44, 52 #64, 58 #33-#35, 63 #52-#53, 65 #15-#16, 84 #60-#61 <i>Algebra Lab</i> 45 <b>Teacher Wraparound Edition:</b> A 44, 45; AE 40, 41; F 41; PA 44; T 45; TNT 40, 44
Use reasoning to support their mathematical conclusions and problem solutions.	<b>Student Edition:</b> 13 #43, 30 #45, 90 #55, 115 #41, 170 #48, 195 #62, 224 #50, 264 #31, 277 #30, 307 #54, 326 #47, 363 #60, 373 #54, 439 #43, 446 #42, 451 #37, 498 #41, 507 #43, 545 #65, 564 #30
Select and use various types of reasoning and methods of proof.	<b>Student Edition:</b> 39-44, 52 #64, 58 #33-#35, 63 #52-#53, 65 #15-#16, 84 #60-#61 <i>Algebra Lab</i> 45 <b>Teacher Wraparound Edition:</b> A 44, 45; AE 40, 41; F 41; PA 44; T 45; TNT 40, 44
Rely on reasoning, rather than answer keys, teachers, or peers, to check the correctness of their problem solutions.	<b>Student Edition:</b> 13 #43, 30 #45, 90 #55, 115 #41, 170 #48, 195 #62, 224 #50, 264 #31, 277 #30, 307 #54, 326 #47, 363 #60, 373 #54, 439 #43, 446 #42, 451 #37, 498 #41, 507 #43, 545 #65, 564 #30

STANDARDS	PAGE REFERENCES
<p>Make and investigate mathematical conjectures.</p> <ul style="list-style-type: none"> <li>• Counterexamples as a means of disproving conjectures</li> <li>• Verifying conjectures using informal reasoning or proofs.</li> </ul>	<p><b>Student Edition:</b> 39-44, 52 #64, 58 #33-#35, 63 #52-#53, 65 #15-#16, 84 #60-#61 <i>Algebra Lab</i> 45</p> <p><b>Teacher Wraparound Edition:</b> A 44, 45; AE 40, 41; F 41; PA 44; T 45; TNT 40, 44</p>
<p>Evaluate examples of mathematical reasoning and determine whether they are valid.</p>	<p><b>Student Edition:</b> 13 #43, 30 #45, 90 #55, 115 #41, 170 #48, 195 #62, 224 #50, 264 #31, 277 #30, 307 #54, 326 #47, 363 #60, 373 #54, 439 #43, 446 #42, 451 #37, 498 #41, 507 #43, 545 #65, 564 #30</p>
<b>E. Representations</b>	
<p>Create and use representations to organize, record, and communicate mathematical ideas.</p> <ul style="list-style-type: none"> <li>• Concrete representations (e.g., base-ten blocks or algebra tiles)</li> <li>• Pictorial representations (e.g., diagrams, charts, or tables)</li> <li>• Symbolic representations (e.g., a formula)</li> <li>• Graphical representations (e.g., a line graph)</li> </ul>	<p><b>Student Edition:</b> 90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b> AE 107, 113, 123, 262; PA 112</p>
<p>Select, apply, and translate among mathematical representations to solve problems.</p>	<p><b>Student Edition:</b> 90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b> AE 107, 113, 123, 262; PA 112</p>
<p>Use representations to model and interpret physical, social, and mathematical phenomena.</p>	<p><b>Student Edition:</b> 90 #63, 95 #8, 96 #40-#41, 102 #36, 103 #54, 107 ex 4, 109 #30, 112 ex 3, 121 #34, 122 ex 1, 127 #20-#23, 153 #39-#42, 169 #25-#29, 262 ex 3, 263 #7</p> <p><b>Teacher Wraparound Edition:</b> AE 107, 113, 123, 262; PA 112</p>
<b>F. Technology</b>	
<p>Use technology to gather, analyze, and communicate mathematical information.</p>	<p><b>Student Edition:</b> <i>Graphing Calculator Lab</i> 160-162, 197, 203, 210-211, 219, 309, 328, 340, 342, 470, 482; 504, 515-516, 535, 543, 549, 576, 589 <i>Spreadsheet Lab</i> 129, 252</p>

STANDARDS	PAGE REFERENCES
Use computer spreadsheets, software, and graphing utilities to organize and display quantitative information.	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 160-162, 197, 203, 210-211, 219, 309, 328, 340, 342, 470, 482; 504, 515-516, 535, 543, 549, 576, 589 <i>Spreadsheet Lab</i> 129, 252
Use graphing calculators and computer software to investigate properties of functions and their graphs.	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 162-163, 197, 203, 210-211, 219, 328, 470, 504, 515-516, 547 <b>Teacher Wraparound Edition:</b> A 163, 203, 211, 470; T 328, 515
Use calculators as problem-solving tools (e.g., to explore patterns, to validate solutions).	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 160-162, 197, 203, 210-211, 219, 309, 328, 340, 342, 470, 482; 504, 515-516, 535, 543, 549, 576, 589
Use computer software to make and verify conjectures about geometric objects.	See Glencoe <i>Geometry</i> © 2008 <b>Student Edition:</b> 58-59, 148, 273, 433, 478, 511, 588
Use computer-based laboratory technology for mathematical applications in the sciences.	<b>Student Edition:</b> <i>Graphing Calculator Lab</i> 203, 470 <b>Teacher Wraparound Edition:</b> A 203; T 203, 470