

Textbook Alignment to the Utah Core

Instructional Materials Evaluation Criteria (name and grade of the core document used to align)			
<u>Pre-Algebra</u>			
Title <u>Pre-Algebra © 2008</u>		ISBN# <u>978-0-07-873818-0</u>	
Publisher: <u>Glencoe McGraw-Hill</u>			
Name of Person conducting alignment: <u>M Hippler</u>			
Overall percentage of coverage of the Utah State Core Curriculum: <u>98%</u>			
Standard I: Students will understand and perform operations with rational numbers, including negative rational numbers.			
Percentage of coverage for Standard I: 100%			
Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Compute fluently with understanding and make reasonable estimates with rational numbers.	a. Compute fluently using all four operations with integers, and explain why the corresponding algorithms work.	Student Edition: 29 #8, #9, 35 #35-#37, 36 #61-#63, 66 #41, 86-90, 93-97, 100-104, 106-110, 117-118 <i>Algebra Lab</i> 84-85, 92, 99, 105 <i>Mid-Chapter Quiz</i> 98 <i>Practice Test</i> 119 <i>Standardized Test Practice</i> 74 #4 Teacher Wraparound Edition: AA 119; AE 87, 107; DI 204; FMC 87, 94, 101, 107; PA 97; PC 76H, 226H, 178H	

	b. Compute fluently using all four operations with rational numbers, including negative fractions and decimals, and explain why the corresponding algorithms work.	<p>Student Edition: 35 #35-#37, 36 #61-#63, 86-90, 93-97, 100-104, 106-110, 117-118, 239-244, 245-249, 250-254, 261 #64-#67, 263-267, 282-283, 745, 747-750 <i>Algebra Lab</i> 84-85, 92, 99, 105, 208 <i>Mid-Chapter Quiz</i> 256 <i>Practice Test</i> 285 <i>Standardized Test Practice</i> 74 #4, #6</p> <p>Teacher Wraparound Edition: AA 119; DI 204; PC 178H, 226H; TNT 87, 252</p>	
	c. Check the reasonableness of results using estimation.	<p>Student Edition: 28 #3, 41 #58, 47 #60, 88 #5, 89 #41, 154 #3, 215 #3, 250, 265 #4, 329 #3, 331 #43, 343-347, 352, 467 #29, #30, 610-611, 744, 746, 752 <i>Practice Test</i> 173 #21 <i>Standardized Test Practice</i> 120 #4 <i>Study Tip</i> 148, 240, 264, 322, 333</p> <p>Teacher Wraparound Edition: DI 328; FMC 27</p>	
Objective 2: Analyze relationships among rational numbers, including negative rational numbers, and operations involving these numbers.	a. Compare and order rational numbers in various forms, including scientific notation (positive and negative exponents), with and without a number line.	<p>Student Edition: 78-82, 117, 209-213, 216, 230-232, 237 #42-#49, 238 #56, 258, 259, 272 #55-#58, 315, 324 #4, 327, 470, 742 <i>Mid-Chapter Quiz</i> 98 #6, #7 <i>Practice Test</i> 119, 223 <i>Standardized Test Practice</i> 354, 415 #9</p> <p>Teacher Wraparound Edition: AE 79; COI 79; CON 216; DI 80; FMC 226E, 231; PA 233</p>	

	<p>b. Predict the effect of operating with fractions, decimals, percents, and integers as an increase or a decrease of the original value.</p>	<p>Student Edition: 52 #26, #27, 94 #3, 101 #3, 102 #11, 207 #52, 232 #41-#42, 332-336, 338-342, 352, 799 #13 <i>Cross-Curricular Project</i> 177 <i>Practice Test</i> 353 <i>Spreadsheet Lab</i> 337 <i>Standardized Test Practice</i> 120 #4, 174 #3, 355 #12 Teacher Wraparound Edition: AE 339; FMC 340; PA 66, 83, 97, 104</p>	
	<p>c. Recognize and use the identity properties of addition and multiplication, the multiplicative property of zero, the commutative and associative properties of addition and multiplication, and the distributive property of multiplication over addition.</p>	<p>Student Edition: 43-47, 71, 90 #50, #51, 102 #4, 103 #58, 124-128, 133 #62-#65 <i>Algebra Lab</i> 85 <i>Practice Test</i> 73 #5-#7 <i>Standardized Test Practice</i> 75 #9 Teacher Wraparound Edition: AE 125; FMC 24F, 45, 126; PA 128; PC 24H</p>	
	<p>d. Recognize and use the inverse operations of adding and subtracting a fixed number, multiplying and dividing by a fixed number, and computing squares of whole numbers and taking square roots of perfect squares.</p>	<p>Student Edition: 88-89, 94-95, 245-249, 464-468, 504, 781, 802 <i>Algebra Lab</i> 462-463 <i>Practice Test</i> 508 Teacher Wraparound Edition: A 463; FMC 94, 107; PA 244; T 462</p>	

Objective 3: Solve problems involving rational numbers using addition, subtraction, multiplication, and division.	a. Recognize the absolute value of a rational number as its distance from zero.	Student Edition: 78-83, 90 #55, 117 <i>Key Concepts</i> 116 Teacher Wraparound Edition: AE 79; FMC 76E	
	b. Evaluate numeric expressions, including those with whole number exponents and absolute values using the order of operations.	Student Edition: 32-37, 41 #52-#57, 53 #43-#46, 70, 109 #30-#31, 181 #2 <i>Mid-Chapter Quiz</i> 48 #5-#10 <i>Vocabulary Check</i> 69 #4 Teacher Wraparound Edition: FMC 33; PA 30	
	c. Solve problems involving rational numbers, percents, and proportions.	Student Edition: 88 #5, 94 #3, 109, 231 #6, 240 #4, 247 #5, 254 #57, 265 #4, 302-306, 315 #6, 349, 798 #9, 799 #7-#10 <i>Practice Test</i> 119 #13, 353 #20 <i>Standardized Test Practice</i> 120 #3, 224 #4, 286 #2, 355 #12, 415 #7 Teacher Wraparound Edition: AE 240; PA 97	
Standard II: Students will use the language of algebra to analyze and represent relationships, including real-world relationships.			
Percentage of coverage for Standard II: 100%			
Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Generalize and express patterns using algebraic expressions.	a. Compare representations of a relation using tables, graphs, algebraic symbols, and mathematical rules.	Student Edition: 29 #8-#9, 35 #38-#39, 51 #8-#9, 139 #30-#31, 154 #3, 159 #3, 207 #52, 209, 213 #75-#76, 359-363, 365-369, 409 <i>Algebra Lab</i> 208, 358 Teacher Wraparound Edition: AE 361; PA 363	

	b. Describe simple patterns using a mathematical rule or algebraic expression.	Student Edition: 29, 36 #55-#60, 101, 181, 203, 209 <i>Algebra Lab</i> 208, 358 <i>Practice Test</i> 173 #23 <i>Standardized Test Practice</i> 75 #7, 120 #6, 174 #4, 224 #6, 456 #4	
	c. Create and extend simple numeric and visual patterns.	Student Edition: 27-30, 36 #55-#60, 53 #47, 70, 77, 103 #56, 158-161, 167 #45-#46, 172, 180, 297-300 <i>Mid-Chapter Quiz</i> 48 #1, 319 #6-#7 <i>Practice Test</i> 173 #23 <i>Standardized Test Practice</i> 224 #6 Teacher Wraparound Edition: AE 27, 159	
Objective 2: Evaluate, simplify, and solve algebraic expressions, equations, and inequalities.	a. Evaluate algebraic expressions, including those with whole number exponents, when given values for the variable(s).	Student Edition: 37-41, 47 #55-#58, 53 #48-#51, 59 #63-#66, 66 #38-#40, 71, 157 #39-#42 <i>Mid-Chapter Quiz</i> 48 <i>Practice Test</i> 73 <i>Spreadsheet Lab</i> 42 Teacher Wraparound Edition: A 41; AE 38; DI 38	
	b. Simplify algebraic expressions using the properties of algebra.	Student Edition: 45, 46 #38-#46, 53 #37-#40, 66 #37, 71, 126, 129-133, 140 #45-#50, 151 #60-#65, 170 <i>Mid-Chapter Quiz</i> 48 #21-#25, 146 #3-#6 <i>Practice Test</i> 173 #3-#6 Teacher Wraparound Edition: AE 45, 130; FMC 131	

	c. Solve single-variable linear equations and inequalities, including those that must be simplified on one side or those with variables on both sides of an equation.	<p>Student Edition: 136-140, 141-145, 147-151, 170, 171, 417 #1-#6, 420-423, 424-428, 435-439, 441-445, 446-450, 452-454 <i>Algebra Lab</i> 418-419 <i>Mid-Chapter Quiz</i> 146 #11-#14, 440 <i>Practice Test</i> 173 #8-#19, 455 <i>Standardized Test Practice</i> 457 #14</p> <p>Teacher Wraparound Edition: AE 137, 421, 426, 436; DI 421; FMC 137; PA 145</p>	
Objective 3: Represent relationships using graphs, tables, and other models.	a. Identify approximate rational coordinates when given the graph of a point on a rectangular coordinate system.	<p>Student Edition: 54-59, 72, 111-115, 118 <i>Practice Test</i> 119 #28 <i>Standardized Test Practice</i> 121 #12</p>	
	b. Graph ordered pairs of rational numbers on a rectangular coordinate system.	<p>Student Edition: 54-59, 72, 111-115, 118 <i>Practice Test</i> 73 #11-#13, 119 #29-#32 <i>Standardized Test Practice</i> 75 #12, 121 #12</p> <p>Teacher Wraparound Edition: AE 55</p>	
	c. Graph linear equations using ordered pairs or tables.	<p>Student Edition: 113 #3, 367 #3, 368-369, 409 <i>Mid-Chapter Quiz</i> 382 #8-#9 <i>Practice Test</i> 413 #4-#5 <i>Standardized Test Practice</i> 414 #1</p> <p>Teacher Wraparound Edition: AE 366; PA 59, 115</p>	

	d. Model real-world problems using graphs, tables, equations, manipulatives, and pictures and identify extraneous information.	<p>Student Edition: 26, 61, 63 #3, 94 #3, 111, 133 #67, 159 #3, 245, 253 #51-#55, 271 #32-#33, 651-656, 693 <i>Cross-Curricular Project</i> 23, 177, 459, 623 <i>Mid-Chapter Quiz</i> 98 #25, 658 #13-#16 <i>Practice Test</i> 73 #16 <i>Standardized Test Practice</i> 74 #1, 75 #13</p> <p>Teacher Wraparound Edition: AA 507; AE 51; FMC 653; PA 66, 312, 369</p>	
Objective 4: Model and illustrate meanings of ratios, percents, and decimals.	a. Compare ratios to determine if they are equivalent.	<p>Student Edition: 292-296, 300 #26-#27, 312 #20, #21, 324 #4, 349 <i>Reading Math</i> 301</p> <p>Teacher Wraparound Edition: DI 303; I 290E</p>	
	b. Compare ratios using the unit rate.	<p>Student Edition: 292-296, 306 #42-#43, 309 #1, 349, 375 #24, 799 #1 <i>Mid-Chapter Quiz</i> 319 #2 <i>Practice Test</i> 353 #1-#3</p> <p>Teacher Wraparound Edition: FMC 290H, 293</p>	
	c. Recognize percents as ratios based on 100 and decimals as ratios based on powers of ten.	<p>Percents as ratios based on 100 are addressed on the following pages:</p> <p>Student Edition: 313, 322-326 <i>Algebra Lab</i> 320-321</p> <p>Teacher Wraparound Edition: PA 318; PC 290H</p>	

	d. Recognize slope of a line as the constant ratio of the vertical change to the horizontal change in a line using similar triangles.	Student Edition: 384-389, 410 <i>Algebra Lab</i> 383	
	e. Graph proportional relationships and identify the unit rate as the slope of the related line.	Student Edition: 379 #2, 394 #37	
Objective 5: Solve a wide variety of problems using ratios and proportional reasoning.	a. Set up and solve problems involving proportional reasoning using variables.	Student Edition: 297-300, 302-306, 308-312, 322-326, 349-350, 799 <i>Algebra Lab</i> 307 <i>Mid-Chapter Quiz</i> 319 #10 <i>Standardized Test Practice</i> 354 #1 Teacher Wraparound Edition: AE 298, 303; FMC 303, 309	
	b. Solve percent problems including problems involving discounts, interest, taxes, tips, and percent increase or decrease.	Student Edition: 329 #3, 333 #4, 334 #5, 338-342 <i>Spreadsheet Lab</i> 337 <i>Standardized Test Practice</i> 355 #12, 415 #8 Teacher Wraparound Edition: AE 334, 339	
	c. Solve ratio and rate problems using informal methods.	Student Edition: 292-296, 349 <i>Mid-Chapter Quiz</i> 319 #2 Teacher Wraparound Edition: FMC 293	
	d. Identify similar figures based on proportionality.	Student Edition: 497-502, 506, 608-612, 618 <i>Standardized Test Practice</i> 620 #4 Teacher Wraparound Edition: AE 498, 499, 609; FMC 609	

	e. Find missing lengths of similar plane figures, including inaccessible lengths, using proportions.	Student Edition: 497-502, 506, 608-612, 618 <i>Standardized Test Practice</i> 620 #4 Teacher Wraparound Edition: AA 507; FMC 609	
Standard III: Students will understand and apply measurement tools and formulas.			
Percentage of coverage for Standard III: 100%			
Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Apply the properties of proportionality of different units of measure.	a. Convert units of measure within the same system.	Student Edition: 58 #37-#40, 144 #40-#42, 199 #30, 243 #51-#62, 294 #4, 295 #31-#38, 304 #3, 587 #26-#28, #30, #31, 753-755 <i>Cross-Curricular Project</i> 177 <i>Practice Test</i> 223 #20 Teacher Wraparound Edition: PA 588	
	b. Create and interpret scale drawings and approximate distance on maps using properties of similarity.	Student Edition: 308-312, 326 #42, 350, 497-502 <i>Mid-Chapter Quiz</i> 319 #13, #14 <i>Practice Test</i> 507 #20 Teacher Wraparound Edition: AE 309, 310, 499; DI 309; FMC 309; PA 312; T 497	
	c. Solve problems using scale factors.	Student Edition: 308-312, 326 #42, 350, 499-501 <i>Mid-Chapter Quiz</i> 319 #14 Teacher Wraparound Edition: AE 499; PA 312	
	d. Create and interpret scale drawings.	Student Edition: 310 #3, 312 #22, 501 #17-#23 Teacher Wraparound Edition: AE 499; PA 312	

<p>Objective 2: Derive formulas for surface areas and volume of three dimensional shapes.</p>	<p>a. Derive formulas for and calculate surface area and volume of right prisms and cylinders using appropriate units.</p>	<p>Student Edition: 583-588, 597-601, 616, 617 <i>Geometry Lab</i> 596 Teacher Wraparound Edition: AA 619; DI 584; PC 572H; TNT 585</p>	
	<p>b. Explain that if a scale factor describes how corresponding lengths in two similar objects are related, then the square of the scale factor describes how corresponding areas are related and the cube of the scale factor describes how corresponding volumes are related.</p>	<p>Student Edition: 312 #22, 497-498, 501, 506 <i>Geometry Lab</i> 607 Teacher Wraparound Edition: I 498; PA 502; T 497</p>	
	<p>c. Find lengths, areas, and volumes of similar figures, using the scale factor.</p>	<p>Student Edition: 308-312, 350, 497-502, 802 #11 <i>Practice Test</i> 507 #20 Teacher Wraparound Edition: AE 498, 499; I 498</p>	
	<p>d. Select appropriate two- and three-dimensional shapes to model real-world objects and solve a variety of problems involving surface areas and volumes of cylinders and prisms.</p>	<p>Student Edition: 480 #29-#32, 489 #40, #41, 505 #28, 515 #4, 516 #29, 521 #5, 529 #20, 535, 542, 565 #16, 579 #17, 580 #20-#21, 587, 599-601 <i>Cross-Curricular Project</i> 459 <i>Mid-Chapter Quiz</i> 537 Teacher Wraparound Edition: AE 585, 599; PA 588</p>	

Standard IV: Students will apply concepts and methods from statistics and probability to solve real problems.

Percentage of coverage for Standard IV: 89%

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Formulate questions and answer the questions by organizing and analyzing data.	a. Formulate questions that can be answered through data collection and analysis.	Student Edition: 325 #25, #26, 363 #37, 369 #46, 374 #11, 405 #7-#9, 628 #6-#7, 648 #21 <i>Algebra Lab</i> 60, 208, 273, 307 <i>Cross-Curricular Project</i> 23, 177, 623 <i>Graphing Calculator Lab</i> 643 Teacher Wraparound Edition: PA 642, 649	
	b. Determine the 25 th and 75 th percentiles (1 st and 3 rd quartiles) to obtain information about the spread of data.	Student Edition: 634, 636, 691 <i>Practice Test</i> 695 #7 Teacher Wraparound Edition: A 642; AE 634; PA 637	
	c. Graphically summarize data of a single variable using histograms and box and whisker plots.	Student Edition: 638-642, 644-649 <i>Graphing Calculator Lab</i> 643, 650 Teacher Wraparound Edition: AE 639, 640	
	d. Compute the mean and median of a numerical characteristic and relate these values to the histogram of the data.	Student Edition: 645 #28, 648 #21 Teacher Wraparound Edition: PA 649	

	e. Use graphical representations and numerical summaries to answer questions and interpret data.	<p>Student Edition: 61, 63, 65, 127 #45-#47, 213 #75, #76, 271 #32, #33, 325, 346 #11, 628 #7, 635 #5, 648 #21 <i>Algebra Lab</i> 273 <i>Cross-Curricular Project</i> 23, 177, 289, 459, 623 <i>Standardized Test Practice</i> 287 #10</p> <p>Teacher Wraparound Edition: DI 652; PA 642; T 61</p>	
Objective 2: Calculate probabilities of events and compare theoretical and experimental probability.	a. Calculate the probability of an event mathematically using models and the Fundamental Counting Principle.	<p>Student Edition: 665-669, 670-674, 693</p> <p>Teacher Wraparound Edition: DI 671</p>	
	b. Recognize that the sum of the probability of an event and the probability of its complement is equal to one.	This objective can be met in Glencoe's <i>Mathematics: Applications and Concepts Course 3</i> © 2006 page 375	
	c. Make approximate predictions using theoretical probability and proportions.	<p>Theoretical probability is met on the following pages:</p> <p>Student Edition: 666-669</p> <p>Teacher Wraparound Edition: AE 667</p> <p>Probability preparation is met in Glencoe's <i>Mathematics: Applications and Concepts Course 3</i> © 2006 page 401.</p>	

	d. Recognize that results of an experiment more closely approximate the actual or theoretical probability of an event as the number of trials increases.	Student Edition: 667 #4, 668 #22 <i>Graphing Calculator Lab 681</i> Teacher Wraparound Edition: FMC 667; T 675	
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