# Textbook Alignment to the Utah Core – Algebra 1

***This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) Yes _x_ No _____***

**Name of Company and Individual Conducting Alignment**
**Ellen Stadler**

**A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):**

**X On record with the USOE.**

**☐ The "Credential Sheet" is attached to this alignment.**

**Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Algebra 1 Core Curriculum**

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**Title: *Algebra 1* © 2010 ISBN#: 9780078884801**

**Publisher: Glencoe/McGraw-Hill**

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|---|---|---|---|---|
| **Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: _____%**<br><br>**Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: _____%** | | | | |
| **STANDARD I: Students will expand number sense to understand, perform operations, and solve problems with real numbers.** | | | | |
| **Percentage of coverage in the *student and teacher edition* for Standard I:_____ %** | | **Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I: _____%** | | |
| **OBJECTIVES & INDICATORS** | | **Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)** | **Coverage in *Ancillary Material* (titles, pg #'s, etc.)** | ***Not covered in TE, SE or ancillaries*** ✓ |
| **Objective 1.1: Represent real numbers as points on the number line and distinguish rational numbers from irrational numbers.** | | | | |
| **a.** | Define a rational number as a point on the number line that can be expressed as the ratio of two integers, and points that cannot be so expressed as irrational. | **Student Edition:**<br>P7 ex 1<br>**Teacher Wraparound Edition:**<br>AE P7; T P7 | | |
| **b.** | Classify numbers as rational or irrational, knowing that rational numbers can be expressed as terminating or repeating decimals and irrational numbers can be expressed as non-terminating, non-repeating decimals. | **Student Edition:**<br>P7 ex 1, P8 ex 3, P10 #1-#2<br>**Teacher Wraparound Edition:**<br>A P10; AE P7, P8; T P7 | | |
| **d.** | Classify *pi* and square roots of non-perfect square numbers as irrational. | **Student Edition:**<br>P7, P10 #3<br>**Teacher Wraparound Edition:**<br>AE P7 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **d.** | Place rational and irrational numbers on a number line between two integers. | **Student Edition:**<br>P8 ex 2<br>**Teacher Wraparound Edition:**<br>AE P8 | | |
| **Objective 1.2: Compute fluently and make reasonable estimates with rational and irrational numbers.** | | | | |
| **a.** | Simplify, add, subtract, multiply, and divide expressions with square roots. | **Student Edition:**<br>612-617, 619-623, 628#43-#48, 629 #15-#21, 635 #65-#70<br>**Teacher Wraparound Edition:**<br>A 617; AE 613, 614, 620, 621; DI 614, 620, 623; F 613, 621; T 612, 619; TNT 613; TWT 613, 621; WO 615 | | |
| **b.** | Evaluate and simplify numerical expressions containing rational numbers and square roots using the order of operations. | **Student Edition:**<br>410 x 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<br>*Key Concept* 410<br>*Study Tip* 410, 411<br>**Teacher Wraparound Edition:**<br>AE 410, 411; T 416; TNT 410, 411; WO 410, 411 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Compute solutions to problems, represent answers in exact form, and determine the reasonableness of answers. | **Student Edition:** P5-P6, 804, 805, 806-807, 808, 809, 810, 811, 812, 813, 814 **Teacher Wraparound Edition:** A P6; AE P5, P6; T P5; TNT P6; TWT P5 | | |
| **d.** | Calculate the measures of the sides of a right triangle using the Pythagorean Theorem. | **Student Edition:** 630-635, 641 #63-#68, 647 #41-#46, 659 #44-#52, 661 #14-#15, 683 #59-#64 **Teacher Wraparound Edition:** A 635; AE 631; DI 631, 635; F 632; TWT 632, 638; WO 634 | | |
| **STANDARD II: Students will extend concepts of proportion to represent and analyze linear relations.** | | | | |
| **Percentage of coverage in the *student and teacher edition* for Standard II:_____ %** | | **Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: _____%** | | |
| **Objective 2.1: Represent and analyze the slope of a line.** | | | | |
| **a.** | Identify the slope of a line when given points, a graph, or an equation. | **Student Edition:** 170-178, 179 #18-#21, 193 #43-#45, 203 #27-#30, 205 #10-#13, 208 #3, 214 ex 1, 218 #23-#32, 219 #44-#49 **Teacher Wraparound Edition:** A 178; AE 171, 172, 173, 174, 215; DI 173, 174, 178; F 216; T 170; TNT 171 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **b.** | Identify horizontal and vertical lines given the equations or slopes. | **Student Edition:**<br>158 #29-#30, 215 ex 3, 217 #9-#10, 218 #29-#30, 219 #43, 220 #54<br>**Teacher Wraparound Edition:**<br>AE 215 | | |
| **c.** | Determine the effect of changes in slope or *y*-intercept t in $y = mx + b$ . | **Student Edition:**<br>220 #64, 228 #44, 278 #4<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>A 223; F 216 | | |
| **d.** | Determine and explain the meaning of slopes and intercepts using real-world examples. | **Student Edition:**<br>20 #58, 229 #50, 234 #36, 236 #55, 243 #59, 244 #5, 271 #18, 275 #2, 278 #6, 279 #11, 275 #2, 278 #6, 279 #11<br>**Teacher Wraparound Edition:**<br>TWT 225 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **Objective 2.2Model and interpret problems having a constant rate of change using linear functions.** | | | | |
| **a.** | Write algebraic expressions or equations to generalize visual patterns, numerical patterns, relations, data sets, or scatter plots. | **Student Edition:**<br>5-9, 15 #69-#71, 22 #68, 30 #3-#4, 216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>A 9; AE 6, 216; DI 9; F 7; T 5; TWT 216 | | |
| **b.** | Represent linear equations in slope-intercept form, $y = mx + b$, and standard form, $Ax + By = C$. | **Student Edition:**<br>224-230, 231-236, 237 ex 1, 239 ex 4, 240 #1-#2, 241 #11-#16, 242 #47, 243 #53-#58<br>**Teacher Wraparound Edition:**<br>A 236; AE 225, 226, 232, 233, 238, 239; DI 226, 230; F 233; T 224, 231; TWT 225, 232, 238 | | |
| **c.** | Distinguish between linear and non-linear functions by examining a table, equation, or graph. | **Student Edition:**<br>47 ex 2, 49 #6-#8, 50 #25, 66 #67<br>*Study Tip* 47<br>**Teacher Wraparound Edition:**<br>AE 47; TWT 47 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **d.** | Interpret the slope of a linear function as a rate of change in real-world situations. | **Student Edition:**<br>20 #58, 229 #50, 234 #36, 236 #55, 243 #59, 244 #5, 271 #18, 275 #2, 278 #6, 279 #11, 275 #2, 278 #6, 279 #11<br>**Teacher Wraparound Edition:**<br>TWT 225 | | |
| **Objective 2.3: Represent and analyze linear relationships using algebraic equations, expressions, and graphs.** | | | | |
| **a.** | Write the equation of a line when given two points or the slope and a point on the line. | **Student Edition:**<br>231-236, 237 ex 1, 239 ex 4, 240 #1-#2, 241 #11-#16, 242 #47, 244 #12-#13, 272 #28-#38, 275 #3-#4, 277 #2, 279 #7, 288 #65-#68<br>**Teacher Wraparound Edition:**<br>A 236; AE 232, 233, 238, 239; F 233; TWT 232, 238 | | |
| **b.** | Approximate the equation of a line given the graph of a line. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Identify the *x*- and *y*-intercepts from an equation or graph of a line or a table of values. | **Student Edition:**<br>154, 155 ex 3, 157 #5-#6, 158 #23-#28, 159 #51-#56, 166 #55-#57, 178 #60-#61, 202 #11-#12, 205 #1-#2, 214 ex 1<br>**Teacher Wraparound Edition:**<br>A 160; AE 154, 155, 215 | | |
| **d.** | Graph linear relations and inequalities by plotting points, by finding *x*- and *y* intercepts, or by using the slope and any point on the line. | **Student Edition:**<br>224-230, 231-236, 237 ex 1, 239 ex 4, 240 #1-#2, 241 #11-#16, 242 #47, 243 #53-#58<br>**Teacher Wraparound Edition:**<br>A 236; AE 225, 226, 232, 233, 238, 239; DI 226, 230; F 233; T 224, 231; TWT 225, 232, 238 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **STANDARD III: Students will develop fluency with the language and operations of algebra to analyze and represent relationships.** | | | | |
| **Percentage of coverage in the *student and teacher edition* for Standard III:_____ %** | | **Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: _____%** | | |
| **Objective 3.1: Simplify polynomials and the quotient of monomials.** | | | | |
| **a.** | Simplify and evaluate monomial expressions and formulas. | **Student Edition:** 401-407, 408-415, 422 #80-#85, 430 #1-#4, 460 #11-#18, 463 #1-#2, 466 #2 **Teacher Wraparound Edition:** A 415; AE 402, 403, 404, 409, 410, 411; DI 403; F 409 | | |
| **b.** | Add and subtract polynomials. | **Student Edition:** 433-438, 444 #55-#60, 452 #55-#62, 461 #37-#40, 463 #14-#15, 466 #5 **Teacher Wraparound Edition:** A 438; AE 434, 435; DI 435, 438; F 434; TWT 435 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Multiply monomials by a polynomial. | **Student Edition:**<br>401-407, 430 #1-#4, 439-444, 458 #72-#77, 460 #11-#18, 463 #1-#2, 466 #1<br>**Teacher Wraparound Edition:**<br>A 444; AE 402, 403, 404, 440, 441; DI 441; F 440 | | |
| **d.** | Multiply binomials. | **Student Edition:**<br>447-452, 453-458, 462 #47-#50<br>*Algebra Lab* 445-446<br>**Teacher Wraparound Edition:**<br>A 446, 452, 458; AE 448, 449, 454, 455; DI 448, 452; ETC 446; F 448, 454; T 447, 453; TNT 448; TWT 449 | | |
| **e.** | Simplify the quotient of monomials using positive exponents. | **Student Edition:**<br>408-415, 422 #80-#85, 429 #71-#72, 430 #6-#9, 460 #20-#27, 463 #4-#6, 466 #2<br>**Teacher Wraparound Edition:**<br>A 415; AE 409, 410, 411; TNT 411; TWT 409 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **Objective 3.2: Solve and interpret linear equations and inequalities in various situations including real-world problems.** | | | | |
| **a.** | Solve single-variable linear equations and inequalities algebraically and graphically. | **Student Edition:**<br>83-89, 91-96, 97-102<br>*Algebra Lab* 81-82, 90<br>**Teacher Wraparound Edition:**<br>A 82, 89, 102; AE 84, 85, 92, 93, 98; DI 89, 92, 93; ETC 82; F 84, 85, 93; T 81, 91; TNT 99; TWT 85, 92 | | |
| **b.** | Solve real-world problems involving constant rates of change. | **Student Edition:**<br>20 #58, 229 #50, 234 #36, 236 #55, 243 #59, 244 #5, 271 #18, 275 #2, 278 #6, 279 #11, 275 #2, 278 #6, 279 #11<br>**Teacher Wraparound Edition:**<br>TWT 225 | | |
| **c.** | Solve equations for a specified variable. | **Student Edition:**<br>126-131, 138 #31-#33, 143 #71-#77, 145 #21-#22, 149 #9, 160 #70-#73<br>**Teacher Wraparound Edition:**<br>A 131; AE 127, 128; F 128; TWT 127; WO 131 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **d.** | Solve proportions that include algebraic first-degree expressions. | **Student Edition:**<br>111-117, 124 #54, 131 #51-#53, 142 #57-#59, 145 #15-#16, 147 #4, 149 #10<br>*Spreadsheet Lab* 118<br>**Teacher Wraparound Edition:**<br>A 118; AE 112, 113, 114; DI 113, 114, 117; F 112; T 118; TWT 112; WO 112, 117 | | |
| **Objective 3.3: Solve and interpret pairs of linear equations and inequalities.** | | | | |
| **a.** | Solve systems of two linear equations graphically and algebraically with and without technology. | **Student Edition:**<br>333-339, 342-347, 348-354, 355-360<br>*Graphing Technology Lab* 340-341<br>**Teacher Wraparound Edition:**<br>A 347, 354, 360; AE 334, 335, 343, 344, 349, 350, 356, 357; DI 334, 347, 350, 360; F 335, 349, 350, 356 | | |
| **b.** | Determine the number of possible solutions for a system of two linear equations. | **Student Edition:**<br>333-339, 342-347, 348-354, 355-360<br>*Graphing Technology Lab* 340-341<br>**Teacher Wraparound Edition:**<br>A 347, 354, 360; AE 334, 335, 343, 344, 349, 350, 356, 357; DI 334, 347, 350, 360; F 335, 349, 350, 356 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Graph a system of linear inequalities and identify the solution. | **Student Edition:**<br>382-386, 392 #67-#71, 393 #22-#25, 407 #72-#75, 415 #71-#74<br>*Graphing Technology Lab* 387<br>**Teacher Wraparound Edition:**<br>A 386; AE 383, 384; DI 383; T 382; TWT 385 | | |
| **Objective 3.4: Factor polynomials with common monomial factors and factor simple quadratic expressions.** | | | | |
| **a.** | Find the greatest common monomial factor of a polynomial. | **Student Edition:**<br>471-474, 476 ex 1, 479 #1-#4, 480 #15-#20, 481 #48, 482 #61-#66, 492 #13-#15, 514 #20-#21, 517 #10-#11<br>*Algebra Lab* 475<br>**Teacher Wraparound Edition:**<br>A 474, 475, 484; AE 472, 477; DI 474, TNT 477; TWT 474 | | |
| **b.** | Factor trinomials with integer coefficients of the form $x2 + bx + c$ . | **Student Edition:**<br>485-491, 492 #20-#22, 498 #49-#54, 515 #31-#34, 517 #18-#21, 521 #8<br>*Algebra Lab* 483-484<br>**Teacher Wraparound Edition:**<br>A 491; AE 486, 487, 488; DI 486, 488; F 487; TWT 487; WO 489, 491 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Factor the difference of two squares and perfect square trinomials. | **Student Edition:**<br>499-504, 505-512, 516 #50-#53, 517 #22-#23<br>**Teacher Wraparound Edition:**<br>A 504, 512; AE 500, 501, 506, 507; DI 504; F 507; T 499, 505; TWT 506; WO 506, 507 | | |
| **Objective 3.5: Solve quadratic equations using factoring or by taking square roots.** | | | | |
| **a.** | Solve quadratic equations that can be simplified to the form $x2 = a$ where $a \geq 0$ by taking square roots. | **Student Edition:**<br>508 ex 4, 509 #7-#10, 510 #34-#35, 516 #65-#69<br>*Key Concept* 508<br>**Teacher Wraparound Edition:**<br>AE 508 | | |
| **b.** | Solve quadratic equations using factoring. | **Student Edition:**<br>478 ex 4, 479 #9-#12, 480 #39-#44, 481 #48, 488 ex 4, 489 #5-#10, 492 #23-#25, 495 ex 4, 496 #23-#28, 498 #48, 501 ex 4, 503 #48-#55, 504 #65, 507 ex 3, 509 #7-#10, 510 #34-#43, 514 #26-#29, 515 #35-#39, 516 #54-#57, 517 #26-#29<br>**Teacher Wraparound Edition:**<br>AE 478, 479, 488, 495, 501, 507 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Write a quadratic equation when given the solutions. | **Student Edition:**<br>497 #43 | | |
| **STANDARD IV: Students will understand concepts from statistics and apply statistical methods to solve problems.** | | | | |
| **Percentage of coverage in the *student and teacher edition* for Standard IV:_____ %** | | **Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: _____%** | | |
| **Objective 4.1: Objective 1: Summarize, display, and analyze bivariate data.** | | | | |
| **a.** | Collect, record, organize, and display a set of data with at least two variables. | **Student Edition:**<br>P40-P43, P45 #69, 740-745, 746-755, 762 #34-#35, 763 #12, 794 #6-#8<br>**Teacher Wraparound Edition:**<br>A P43, 745; AE P40, P41, P42, 741, 742, 748, 749; DI 742; F 741; T 740, 746; TWT 741 | | |
| **b.** | Determine whether the relationship between two variables is approximately linear or non-linear by examination of a scatter plot. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Characterize the relationship between two linear related variables as having positive, negative, or approximately zero correlation. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |
| **Objective 4.2: Estimate, interpret, and use lines fit to bivariate data.** | | | | |
| **a.** | Estimate the equation of a line of best fit to make and test conjectures. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |
| **b.** | Interpret the slope and *y*-intercept of a line through data. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |

| OBJECTIVES & INDICATORS | | Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.) | Coverage in *Ancillary Material* (titles, pg #'s, etc.) | *Not covered in TE, SE or ancillaries* ✓ |
|---|---|---|---|---|
| **c.** | Predict *y*-values for given *x*-values when appropriate using a line fitted to bivariate numerical data. | **Student Edition:**<br>216 ex 4, 218 #11-#14, 219 #33-#36, 230 #63-#64, 235 #40-#42, 244 #1-#2, 279 #7<br>*Graphing Technology Lab* 222-223<br>**Teacher Wraparound Edition:**<br>AE 216; TWT 216 | | |