

|   |               |  |
|---|---------------|--|
| <b>Main Criteria: Texas Essential Knowledge and Skills (TEKS)</b> |               |  |
| <b>Secondary Criteria: Math-U-See Algebra 2</b>                   |               |  |
| <b>Subject: Mathematics</b>                                       |               |  |
| <b>Grade: 10</b>  |               |  |
| <b>Correlation Options: Show Correlated</b>                       |               |  |
|   |               |  |
| <b>Texas Essential Knowledge and Skills (TEKS)</b>                |               |  |
| <b>Mathematics</b>  |               |  |
| TEKS  | 111.40.       | Algebra II, Adopted 2012 (One-Half to One Credit).   |
| STUDENT EXPECTATION   | 111.40.c.3.   | Systems of equations and inequalities. The student applies mathematical processes to formulate systems of equations and inequalities, use a variety of methods to solve, and analyze reasonableness of solutions. The student is expected to:  |
| GRADE LEVEL EXPECTATION   | 111.40.c.3.A. | Formulate systems of equations, including systems consisting of three linear equations in three variables and systems consisting of two equations, the first linear and the second quadratic.<br><br>Algebra 2<br>Lesson 28: Coin Problems, Consecutive Integers, and Chemical Mixtures<br>Lesson 29: Age and Boat-in-the-Current Problems |
| GRADE LEVEL EXPECTATION   | 111.40.c.3.B. | Solve systems of three linear equations in three variables by using Gaussian elimination, technology with matrices, and substitution.<br><br>Algebra 2<br>Lesson 28: Coin Problems, Consecutive Integers, and Chemical Mixtures<br>Lesson 29: Age and Boat-in-the-Current Problems<br>Lesson 30: Solving Equations with Three Variables    |
| STUDENT EXPECTATION   | 111.40.c.4.   | Quadratic and square root functions, equations, and inequalities. The student applies mathematical processes to understand that quadratic and square root functions, equations, and quadratic inequalities can be used to model situations, solve problems, and make predictions. The student is expected to:                              |
| GRADE LEVEL EXPECTATION   | 111.40.c.4.F. | Solve quadratic and square root equations.<br><br>Algebra 2<br>Lesson 11: Completing the Square  |
| STUDENT EXPECTATION   | 111.40.c.7.   | Number and algebraic methods. The student applies mathematical processes to simplify and perform operations on expressions and to solve equations. The student is expected to:   |
| GRADE LEVEL EXPECTATION   | 111.40.c.7.E. | Determine linear and quadratic factors of a polynomial expression of degree three and of degree four, including factoring the sum and difference of two cubes and factoring by grouping.<br><br>Algebra 2<br>Lesson 05: Factoring Polynomials; Rational Expressions<br>Lesson 09: Squares, Cubes, and Pascal's Triangle                    |
| GRADE LEVEL EXPECTATION   | 111.40.c.7.F. | Determine the sum, difference, product, and quotient of rational expressions with integral exponents of degree one and of degree two.<br><br>Algebra 2<br>Lesson 02: Rational Expressions  |
|   |               |  |

**Note on Mathematical Process Standards (111.40.c.1):**

Texas Mathematical Process Standards apply broadly across all mathematics courses and instructional approaches. Because these standards describe general problem-solving and reasoning practices rather than Algebra II-specific content, they are not listed individually in this alignment. Math-U-See Algebra II supports these process skills throughout instruction.