



# Algebraic Reasoning Mathematics

Essential Resources

**District Resources to Teach 100% of the TEKS located in the NBISD ECourse Resources, [Algebraic Reasoning Online Textbook](#)**

**Link to TEKS: <https://tea.texas.gov/curriculum/teks/>**

Spiraled TEKS

**Process Skills Embedded in All Lessons 6.1(A) apply mathematics to problems arising in everyday life, society, and the workplace 6.1(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution 6.1(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems**

| Timeline |  | 1st Quarter<br>Aug 24 - Oct 16, 2020<br>(38 Instructional Days)   |   |  |  | 2nd Quarter<br>Oct 19 - Dec 18, 2020<br>(40 Instructional Days)   |  |   |
|----------|--|---|---|--|--|---|--|---|
| Unit     |  | Unit 1<br>Equations and Inequalities  | Unit 2<br>Functions   | Unit 3<br>Graphing Linear Relationships  |  | Unit 4<br>Describing Linear Functions   | Unit 5<br>Systems of Equations   | Unit 6<br>Absolute Value Functions  |
| Big Idea | Current Grade                              | Solve Multi-Step Equations and Inequalities   | Evaluating functions, critical attributes of functions transformations of functions | Calculating Slope, Graphing Linear Functions   |  | Modeling Linear Data, Write a linear model to fit data, write equations of parallel and perpendicular lines,  | Solve systems by graphing, substitution, elimination   | Graph Absolute Value Functions and identify critical attributes, explore transformations of absolute value functions, solve absolute value equations and inequalities |
|          | Previous Grade:<br><small>Geometry</small> | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |   |  |  | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |  |   |
| TEKS     | Current Grade                              | AR.2A, AR.2B  | AR.2C, AR.2D, AR.3A, AR.6B, AR.7A, AR.7B, AR.7C, AR.7D, AR.7E                       | AR.4A, AR.4B   |  | AR.4A, AR.4B  | AR.4A, AR.4B   | AR.2C, AR.2D, AR.3A, AR.6A, AR.7A, AR.7B, AR.7C, AR.7D  |
|          | Previous Grade:<br><small>Geometry</small> | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |   |  |  | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |  |   |
| Timeline |  | 3rd Quarter<br>Jan 4 - March 12, 2021<br>(48 Instructional Days)  |   |  |  | 4th Quarter<br>March 22 - May 27, 2021<br>(48 Instructional Days)   |  |   |
| Unit     |  | Unit 7<br>Polynomial Operations   | Unit 8<br>Factoring   | Unit 9<br>Graphing Quadratic Relationships   | Unit 10<br>Solving Quadratic Equations   | Unit 11<br>Rational Expressions   | Unit 12<br>Radical Functions and Equations   | Unit 13<br>Proportional Reasoning   |
| Big Idea | Current Grade                              | Add, subtract, multiply, and divide polynomials   | Factor polynomials including sum and difference of cubes and grouping               | Identify key features for quadratic functions written in standard or vertex form, convert a function written in vertex form to standard form, understand the connection between a quadratic's zeros and its linear factors | Solve quadratic equations by factoring, quadratic formula, and completing the square | Simplify rational expressions and identify excluded values, multiply and divide rational expressions, solve rational equations                            | Solve square root and cube root equations, graph square root and cube root equations, explore transformations of square root and cube root equations | Solve problems involving ratio, proportion, percent, and probability  |
|          | Previous Grade:<br><small>Geometry</small> | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |   |  |  | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |  |   |
| TEKS     | Current Grade                              | AR.4A, AR.4B  | AR.4A, AR.4B  | AR.4A, AR.4B   | AR.4A, AR.4B, AR.4C, AR.4D   | AR.4A, AR.4B, AR.4C, AR.4D  | AR.3A, AR.3B, AR.3C  |   |
|          | Previous Grade:<br><small>Geometry</small> | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |   |  |  | All TEKS from previous course necessary for success in Algebraic Reasoning were fully taught in the previous course, even with COVID-19 Remote Learning." |  |   |