In March 2020, school districts across the state experienced school closure due to COVID-19. Although schools were closed, districts transitioned to online instruction. The design and content of the at-home instruction model for districts varied across the state. Some taught review units of instruction, while others continued to teach the next units of instruction within their scope and sequence. Although some districts continued to teach the next units of instruction, the depth of concept expectations within the units may not have been met by all students. In order to support foundational understandings of concepts within the last nine weeks of 2019-2020, the mathematics team of TEKS Resource System has designed the Mathematics COVID-19 Gap Implementation Tool for district considerations during the 2020-2021 school year.

For non-STAAR tested grade levels, some units in the last nine weeks may have included concepts that had not been introduced earlier in the school year. For STAAR-tested grade levels, most school districts were completing the teaching of all standards in preparation of the upcoming STAAR. TEKS Resource System was diligent when creating each grade level scope and sequence to ensure the 4th nine weeks units were designed to solidify foundational understandings for students to be prepared for the next grade level. Therefore, the TEKS Resource System Mathematics COVID-19 Gap Implementation Tool reminds teachers to consider all previous grade level(s) standards of the last nine weeks that are aligned to the current grade level standards of the 2020-2021 school year.   
Note: Since these tools highlight the standards of the previous grade level(s), there is not a Kindergarten Mathematics COVID-19 Gap Implementation Tool.

Our goal is to encourage the inclusion of previous foundational understandings when appropriate throughout the year rather than beginning the 2020-2021 school year reviewing the last nine weeks of the previous year. We are not asking teachers to teach an additional nine weeks of school, but to use instructional techniques such as pre-assessing and wrapping of standards to connect vertically aligned grade level understandings seamlessly. Or, districts may choose to spiral previous foundational understandings prior to the current grade level unit of instruction.

**Gap Considerations at a Glance**

|  |  |  |
| --- | --- | --- |
| **Previous Grade Level → Current Grade Level** | **Previous Grade Level Concepts**  **NOT Taught or NOT COMPLETELY Taught**  **Prior to Last Nine Weeks of 2019-2020**  **That Impact the Current Grade Level** | **Previous Grade Level Concepts**  **Being Reviewed or Extended**  **in the Last Nine Weeks of 2019-2020**  **That May Impact the Current Grade Level** |
| Algebra I → Algebra II | Geometric sequences | Transformations of functions; Key attributes of functions; Graphing and writing functions; Solving equations and inequalities; Systems of equations and inequalities; Factoring; Rational exponents |

**Quick Key to Reading the Mathematics COVID-19 Gap Implementation Tool**

|  |  |
| --- | --- |
| **Strikethrough(s)** | Strikethrough(s) in the previous grade level **Last 9 Weeks Standards** column reflect the strikethrough(s) that appear in the previous grade level Unit IFDduring the last 9 weeks. This strikethrough(s) indicates the part of the SE that was not included in the hyperlinked previous grade level unit.  Strikethrough(s) in the current grade level **Aligned Standards** column reflect the strikethrough(s) that appear in the current grade level Unit IFD. This strikethrough(s) indicates the part of the SE that is not included in the current grade level unit where the gap is being considered.  While the standards in each row of the table are vertically aligned, any strikethroughs are not necessarily vertically aligned. |
| **Underlines** | **No underline** indicates the standard was completely taught prior to the 4th nine weeks.  **Underline** indicates the standard or part of the standard was not taught prior to the 4th nine weeks. |
| **Xs** | An X in a column **with** a previous grade level hyperlink indicates the current grade level unit in which all of the current grade level standards in the row occur and where the gap considerations from the previous grade level impact the current unit.  An X in a column **without** a previous grade level hyperlink indicates where all or some of the current grade level standards in the row occur in the scope and sequence. |
| **Hyperlinks** | A hyperlink to the previous grade level Unit IFD along with the previous grade level standards allows for quick access to view the specificity of the previous grade level standard(s) that includes a potential gap. |
| **Alternating Shading** | Alternating white and gray shading allows for easy visualization of a change in unit number. |

For complete instruction on how to read this tool, see the [Mathematics COVID-19 Gap Implementation Tool Instructions](https://www.teksresourcesystem.net/module/portfolio/filehandler.ashx?ID=934322).

|  |  | **2020–2021 School Year Algebra II Units Reflected on Year at a Glance (YAG)** | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Algebra I**  **Last 9 Weeks Standards  2019-2020** | **Algebra II  Aligned Standards**  **2020-2021** | **Unit**  **01** | **Unit**  **02** | **Unit**  **03** | **Unit**  **04** | **Unit**  **05** | **Unit**  **06** | **Unit**  **07** | **Unit**  **08** | **Unit**  **09** | **Unit**  **10** | **Unit**  **11** | **Unit**  **12** | **Unit**  **13** |
| **A.3C** Graph linear functions on the coordinate plane and identify key features, including *x*-intercept,  *y-*intercept, zeros, and slope, in mathematical and real-world problems.  *Readiness Standard*  **A.7A** Graph quadratic functions on the coordinate plane and use the graph to identify key attributes, if possible, including *x*-intercept, *y*-intercept, zeros, maximum value, minimum values, vertex, and the equation of the axis of symmetry.  *Readiness Standard*  **A.9D** Graph exponential functions that model growth and decay and identify key features, including *y-*intercept and asymptote, in mathematical and real-world problems.  *Readiness Standard* | **2A.2A** Graph the functions *f(x)=*√*x, f(x)=*1*/x, f(x)=x*3*, f(x)=* 3√*x, f(x)=bx, f(x)=*|*x*|*,* and *f(x)=logb (x)* where *b* is 2, 10, and *e*, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, ~~and maximum and minimum given an interval~~. | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.3C**  **A.7A**  **A.9D** | **X** |  |  |  | **X** | **X** | **X** | **X** | **X** |  | **X** |  |
| **Considerations:**  Although students may have been taught A.3C, A.7A, and A.9D, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.2A. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of graphing linear, quadratic, and exponential functions and identifying their key features prior to graphing other parent functions and analyzing their key attributes. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.2A** Determine the domain and range of a linear function in mathematical problems; determine reasonable domain and range values for real-world situations, both continuous and discrete; and represent domain and range using inequalities.  *Readiness Standard*  **A.6A** Determine the domain and range of quadratic functions and represent the domain and range using inequalities.  *Readiness Standard* | **2A.7I** Write the domain and range of a function in interval notation, inequalities, and set notation.  *Supporting Standard* | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.2A**  **A.6A** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Considerations:**  Although students may have been taught A.2A and A.6A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.7I. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of domain and range of linear, quadratic, and exponential functions and representing domain and range using inequalities prior to writing the domain and range of functions in interval notation and set notation.   Note: In Algebra I Unit 09, students determined the domain and range of exponential functions of the form *f*(*x*) = *abx* and represented the domain and range using inequalities. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.7C** Determine the effects on the graph of the parent function  *f(x) =* x2 when *f(x)* is replaced by *af(x), f(x) + d, f(x - c), f(bx)* for specific values of *a*, *b*, *c,* and *d*.  *Readiness Standard* | **2A.6C** Analyze the effect on the graphs of *f(x) = |x|* when *f(x)* is replaced by *af(x), f(bx)*, *f(x-c)*, and *f(x)* + *d*for specific positive and negative real values of *a, b, c,*and *d*.  *Supporting Standard* |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.7C** |  |  |  |  |  |  |  |  |  |  |  |
| **Considerations:**  Although students may have been taught A.7C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.6C. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of the effect of *a*, *b*, *c*, and *d* on the graph of a parent function prior to analyzing the effect of *a*, *b*, *c*, and *d* on the graphs of absolute value functions.   Note: In Algebra I, students also determined the effects of transformations on the linear parent function. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.5A** Solve linear equations in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides.  *Readiness Standard* | **2A.6E** Solve absolute value linear equations.  *Readiness Standard* |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.5A** |  |  |  |  |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.5A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.6E. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of solving linear equations prior to solving absolute value linear equations. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.5B** Solve linear inequalities in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides.  *Supporting Standard* | **2A.6F** Solve absolute value linear inequalities.  *Supporting Standard* |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.5B** |  |  |  |  |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.5B, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.6F. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of solving linear inequalities prior to solving absolute value linear inequalities. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.2I** Write systems of two linear equations given a table of values, a graph, and a verbal description.  *Readiness Standard* | **2A.3A** 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~~.  *Readiness Standard* |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.2I** |  | **X** |  |  |  |  |  |  |  | **X** |
| **Considerations:**  Although students may have been taught A.2I, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.3A. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of writing systems of two linear equations prior to formulating systems of three linear equations in three variables. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.5C** Solve systems of two linear equations with two variables for mathematical and real-world problems.  *Readiness Standard* | **2A.3B** Solve systems of three linear equations in three variables by using Gaussian elimination, technology with matrices, and substitution.  *Readiness Standard* |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.5C** |  |  |  |  |  |  |  |  | **X** | **X** |
| **Considerations:**  Although students may have been taught A.5C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.3B. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of solving systems of two linear equations with two variables prior to solving systems of three linear equations in three variables. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.2H** Write linear inequalities in two variables given a table of values, a graph, and a verbal description.  *Supporting Standard* | **2A.3E** Formulate systems of at least two linear inequalities in two variables.  *Supporting Standard* |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.2H** |  |  |  |  |  |  |  |  |  | **X** |
| **Considerations:**  Although students may have been taught A.2H, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.3E. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of writing linear inequalities in two variables prior to formulating systems of linear inequalities in two variables. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.3D** Graph the solution set of linear inequalities in two variables on the coordinate plane.  *Readiness Standard*  **A.3H** Graph the solution set of systems of two linear inequalities in two variables on the coordinate plane.  *Supporting Standard* | **2A.3F** Solve systems of two or more linear inequalities in two variables.  *Supporting Standard*  **2A.3G** Determine possible solutions in the solution set of systems of two or more linear inequalities in two variables.  *Supporting Standard* |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.3D**  **A.3H** |  |  |  |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.3D and A.3H, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.3F and 2A.3G. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of graphing the solution set of systems of two linear inequalities prior to solving systems with more than two linear inequalities. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.10E** Factor, if possible, trinomials with real factors in the form  *ax*2 + *bx* + *c*, including perfect square trinomials of degree two.  *Readiness Standard*  **A.10F** Decide if a binomial can be written as the difference of two squares and, if possible, use the structure of a difference of two squares to rewrite the binomial.  *Supporting Standard* | **2A.7D** Determine the linear factors of a polynomial function of degree three and of degree four using algebraic methods.  *Supporting Standard*  **2A.7E** 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.  *Readiness Standard* |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.10E**  **A.10F** |  |  |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.10E and A.10F, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.7D and 2A.7E. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of factoring trinomials of the form *ax*2 + *bx* + *c* prior to determining the linear and quadratic factors of polynomial expressions of degree three and of degree four. * Pre-assess students’ understanding of factoring using the difference of squares prior to determining the linear and quadratic factors of polynomial expressions of degree three and of degree four. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.11B** Simplify numeric and algebraic expressions using the laws of exponents, including integral and rational exponents.  *Readiness Standard* | **2A.7H** Solve equations involving rational exponents.  *Readiness Standard* |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.11B** |  | **X** | **X** |  | **X** |  |  |  |  |
| **Considerations:**  Although students may have been taught A.11B, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.7H. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of simplifying numeric and algebraic expressions involving rational exponents prior to solving equations involving rational exponents. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.6B** Write equations of quadratic functions given the vertex and another point on the graph, write the equation in vertex form  (*f(x) = a(x - h)*2*+ k*), and rewrite the equation from vertex form to standard form (*f(x) = ax*2*+ bx + c*).  *Supporting Standard*  **A.6C** Write quadratic functions when given real solutions and graphs of their related equations.  *Supporting Standard* | **2A.4B** Write the equation of a parabola using given attributes, including vertex, focus, directrix, axis of symmetry, and direction of opening.  *Readiness Standard*  **2A.4D** Transform a quadratic function *f(x) = ax*2 *+ bx + c* to the form *f(x) = a(x - h)*2 *+ k* to identify the different attributes of *f(x).*  *Supporting Standard* |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.6B**  **A.6C** |  |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.6B and A.6C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.4B and 2A.4D. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of writing quadratic functions given the vertex and another point on the graph, real solutions, or the graph prior to writing equations using the focus and directrix. * Pre-assess students’ understanding of writing quadratic functions in vertex form prior to writing equations of parabolas in standard form or conic form. * Pre-assess students’ understanding of writing quadratic functions in vertex form prior to writing equations of parabolas with a horizontal axis of symmetry. * Pre-assess students’ understanding of rewriting quadratic equations from vertex to standard form prior to transforming quadratic equations from standard to vertex form. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.8B** Write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.  *Supporting Standard* | **2A.4E** Formulate quadratic ~~and square root~~ equations using technology given a table of data.  *Supporting Standard* |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.8B** | **X** |  |  |  |  |  |  | **X** |
| **Considerations:**  Although students may have been taught A.8B, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.4E. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of writing quadratic functions using quadratic regression prior to writing quadratic equations using other technology methods (i.e., transformations, matrices). | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.8A** Solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula.  *Readiness Standard* | **2A.4F** Solve quadratic ~~and square root~~ equations.  *Readiness Standard*  **2A.4H** Solve quadratic inequalities.  *Supporting Standard* |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.8A** | **X** |  |  |  |  |  | **X** | **X** |
| **Considerations:**  Although students may have been taught A.8A, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.4F and 2A.4H. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of solving quadratic equations having real solutions prior to solving quadratic equations having complex solutions. * Pre-assess students’ understanding of solving quadratic equations prior to solving quadratic inequalities. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.7C** Determine the effects on the graph of the parent function  *f(x) =* x2 when *f(x)* is replaced by *af(x), f(x) + d, f(x - c), f(bx)* for specific values of *a*, *b*, *c,* and *d*.  *Readiness Standard* | **2A.4C** Determine the effect on the graph of *f(x) =* √*x* when *f(x)* is replaced by *af(x), f(x) + d, f(bx)*, and *f(x*- *c)* for specific positive and negative values of *a, b, c,*and *d*.  *Readiness Standard* |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.7C** |  |  |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.7C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.4C. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of the effect of *a*, *b*, *c*, and *d* on the graph of a parent function prior to analyzing the effect of *a*, *b*, *c*, and *d* on the graphs of square root functions.   Note: In Algebra I, students also determined the effects of transformations on the linear parent function. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.7C** Determine the effects on the graph of the parent function  *f(x) =* x2 when *f(x)* is replaced by *af(x), f(x) + d, f(x - c), f(bx)* for specific values of *a*, *b*, *c,* and *d*.  *Readiness Standard* | **2A.6A** Analyze the effect on the graphs of *f(x) = x*3 and *f(x)* = 3√*x* when *f(x)* is replaced by *af(x), f(bx), f(x - c)*, and *f(x)* + *d* for specific positive and negative real values of *a, b, c,* and *d*.  *Supporting Standard* |  |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.7C** |  |  |  |  |  |  |
| **Considerations:**  Although students may have been taught A.7C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.6A. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of the effect of *a*, *b*, *c*, and *d* on the graph of a parent function prior to analyzing the effect of *a*, *b*, *c*, and *d* on the graphs of cubic and cube root functions.   Note: In Algebra I, students also determined the effects of transformations on the linear parent function. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.7C** Determine the effects on the graph of the parent function  *f(x) =* x2 when *f(x)* is replaced by *af(x), f(x) + d, f(x - c), f(bx)* for specific values of *a*, *b*, *c,* and *d*.  *Readiness Standard* | **2A.6G** Analyze the effect on the graphs of *f(x) = 1/x* when *f(x)* is replaced by *af(x), f(bx)*, *f(x*- *c)*, and *f(x)* + *d* for specific positive & negative real values of *a, b, c,* & *d*.  *Supporting Standard* |  |  |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.7C** |  |  |  | **X** |  |
| **Considerations:**  Although students may have been taught A.7C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.6G. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of the effect of *a*, *b*, *c*, and *d* on the graph of a parent function prior to analyzing the effect of *a*, *b*, *c*, and *d* on the graphs of rational functions.   Note: In Algebra I, students also determined the effects of transformations on the linear parent function. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.7C** Determine the effects on the graph of the parent function  *f(x) =* x2 when *f(x)* is replaced by *af(x), f(x) + d, f(x - c), f(bx)* for specific values of *a*, *b*, *c,* and *d*.  *Readiness Standard* | **2A.5A** Determine the effects on the key attributes on the graphs of  *f(x) = bx* ~~and~~ *~~f(x) = log~~~~b~~ ~~(x)~~* where *b* is 2, 10, and *e* when *f(x)* is replaced by *af(x), f(x) + d,* and *f(x – c)* for specific positive and negative real values of *a, c,* and *d*.  *Readiness Standard* |  |  |  |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.7C** | **X** |  | **X** |  |
| **Considerations:**  Although students may have been taught A.7C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.5A. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of the effect of *a*, *b*, *c*, and *d* on the graph of a parent function prior to analyzing the effect of *a*, *b*, *c*, and *d* on the graphs of exponential and logarithmic functions.   Note: In Algebra I, students also determined the effects of transformations on the linear parent function. This standard is not included in this table as it did not fall within the last 9 weeks. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.9C** Write exponential functions in the form *f(x)* = *abx* (where *b* is a rational number) to describe problems arising from mathematical and real-world situations, including growth and decay.  *Readiness Standard* | **2A.5B** Formulate exponential ~~and logarithmic~~ equations that model real-world situations, including exponential relationships written in recursive notation.  *Supporting Standard* |  |  |  |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.9C** | **X** |  |  | **X** |
| **Considerations:**  Although students may have been taught A.9C, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.5B. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of writing exponential functions in the form *f(x)* = *abx* prior to writing exponential functions using transformations or exponential regression. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| **A.12C** Identify terms of arithmetic and geometric sequences when the sequences are given in function form using recursive processes.  *Supporting Standard*  **A.12D** Write a formula for the *n*th term of arithmetic and geometric sequences, given the value of several of their terms.  *Supporting Standard* | **2A.5B** Formulate exponential ~~and logarithmic~~ equations that model real-world situations, including exponential relationships written in recursive notation.  *Supporting Standard* |  |  |  |  |  |  |  |  | **X**  [**A1U10**](https://www.teksresourcesystem.net/module/content/search/item/681094/viewdetail.ashx)  **A.12C**  **A.12D** | **X** |  |  | **X** |
| **Considerations:**  Students may not have been taught A.12C and A.12D and may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.5B. Algebra II teachers should be prepared to:   * Introduce geometric sequences as exponential functions with a restricted domain. * Introduce writing exponential functions in recursive notation. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| There are no additional COVID-19 gap considerations from the previous grade level for this unit. | |  |  |  |  |  |  |  |  |  | **X** |  |  |  |
| **District notes:** | | | | | | | | | | | | | | |
| **A.4C** Write, with and without technology, linear functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.  *Supporting Standard*  **A.8B** Write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.  *Supporting Standard*  **A.9E** Write, using technology, exponential functions that provide a reasonable fit to data and make predictions for real-world problems.  *Supporting Standard* | **2A.8C** Predict and make decisions and critical judgments from a given set of data using linear, quadratic, and exponential models.  *Readiness Standard* |  |  |  |  |  |  |  |  |  |  | **X**  [**A1U11**](https://www.teksresourcesystem.net/module/content/search/item/681095/viewdetail.ashx)  **A.4C**  **A.8B**  **A.9E** | **X** | **X** |
| **Considerations:**  Although students may have been taught A.4C, A.8B, and A.9E, they may not have had the opportunity to solidify the foundational understandings to prepare them for 2A.8C. Algebra II teachers should be prepared to:   * Pre-assess students’ understanding of using technology to write linear, quadratic, and exponential functions for a data set prior to determining which function type best models a given set of data. | | | | | | | | | | | | | | |
| **District notes:** | | | | | | | | | | | | | | |
| There are no additional COVID-19 gap considerations from the previous grade level for this unit. | |  |  |  |  |  |  |  |  |  |  |  | **X** |  |
| **District notes:** | | | | | | | | | | | | | | |
| There are no additional COVID-19 gap considerations from the previous grade level for this unit. | |  |  |  |  |  |  |  |  |  |  |  |  | **X** |
| **District notes:** | | | | | | | | | | | | | | |