**Algebra 2 Learning Goals**

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| **#** | **Learning Goal** | **Standard(s)** |
| A201 | Understand the relationship between zeros and factors of polynomials and use and prove polynomial identities to rewrite expressions. | A-APR.1.1, A-APR.2.2,  A-APR.2.3, A-APR.3.4 |
| A202 | Create equations that represent real-world mathematical relationships, including constraints and literal equations. | A-CED.1.1, A-CED.1.2,  A-CED.1.3, A-CED.1.4,  N-Q.1.2 |
| A203 | Solve simple rational and radical equations including justifications and extraneous solutions. | A-REI.1.1, A-REI.1.2,  N-RN.1.1, N-RN.1.2 |
| A204 | Solve systems of linear and quadratic equations  (including 3x3 systems) | A-REI.3.6, A-REI.3.7,  A-REI.4.11 |
| A205 | Find patterns and structure in polynomial and rational expressions | A-SSE.1.1, A-SSE.1.2,  A-APR.4.6 |
| A206 | Apply transformation rules to polynomial, exponential, logarithmic, trigonometric functions, as well as graphing basic inverse functions. | A-SSE.2.3, F-BF.2.3,  F-BF.2.4, F-BF.1.1c |
| A207 | Construct, compare, and interpret exponential and logarithmic models, including building functions that model a relationship from an arithmetic, geometric or recursive sequence or series. | F-BF.1.1ab, F-BF.1.2,  F-BF.2.a, A-SSE.2.4,  F-LE.1.4, F-LE.2.5 |
| A208 | Interpret functions that arise in real-world context, including restricting domain/range, and interpreting average rate of change. | F-IF.2.4, F-IF.2.5,  F-IF.2.6 |
| A209 | Graph and write equivalent forms of functions by hand and using technology, and compare functions in different representations. | F-IF.3.7, F-IF.3.8,  F-IF.3.9 |
| A210 | Understand independence and conditional probability and use the rules of probability to compute and interpret data in a probability model. | S-CP.1.1, S-CP.1.2,  S-CP.1.3, S-CP.1.4,  S-CP.1.5, S-CP.2.6,  S-CP.2.7 |
| A211 | Model periodic phenomena using the unit circle and trigonometric functions. Prove and apply trigonometric identities. | F-TF.1.1, F-TF.1.2,  F-TF.2.5, F-TF.3.8 |
| A212 | Derive complex solutions from quadratic functions, and perform operations on complex numbers. | G-GPE.1.2, N-CN.1.1, N-CN.1.2, N-CN.3.7,  A-REI.2.4 |
| A213 | Use surveys, experiments and observational studies to collect data. | S-IC.1.1, S-IC.2.3,  S-IC.2.6 |
| A214 | Make inferences and justify statistical conclusions about data. | S-ID.1.4, S-IC.1.2,  S-IC.2.4, S-IC.2.5 |