cK12.org Flexbook Links to Support Curriculum 2.0 Two-year Algebra 2, Algebra 2, and Honors Algebra 2

This document outlines concepts in each Topic for the Unit. When corresponding resources are available in cK12.org, a hyperlink is provided for the Flexbook. The cK12.org Flexbooks provide a variety of examples, definitions, and extra practice problems related to some of the concepts in Curriculum 2.0 Two-year Algebra 2, Algebra 2, and Honors Algebra 2. The concepts will be developed in greater depth and with appropriate vocabulary in the classroom. The materials in the Flexbooks are intended to provide additional support to the classroom expectations. The vocabulary and methods in these examples may differ slightly from the classroom expectation; however, the overall intent is consistent with the content expectation.

Unit 2: Polynomial and Rational Functions

Topic 1: Quadratic Expressions and Equations
- Solve quadratic equations by inspection, taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation. (cK–12 Flexbook Unit 2 Topic 1 SLT 1)
- Identify zeros of quadratic functions when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the quadratic expression. (cK–12 Flexbook Unit 2 Topic 1 SLT 2)
- Solve radical equations in one variable and identify extraneous solutions. (cK–12 Flexbook Unit 2 Topic 1 SLT 3)
- Explore complex numbers and their importance in mathematics.(cK–12 Flexbook Unit 2 Topic 1 SLT 4)
- Define a complex number and determine its relationship to the real number system. (cK–12 Flexbook Unit 2 Topic 1 SLT 5)
- Add, subtract, and multiply complex numbers using properties of operations. (cK–12 Flexbook Unit 2 Topic 1 SLT 6)
- Solidify understanding of addition and multiplication within the complex number system.
- Solve quadratic equations that have complex solutions. (cK–12 Flexbook Unit 2 Topic 1 SLT 8)
- Identify and describe characteristics of quadratic functions given graphs or equations. (cK–12 Flexbook Unit 2 Topic 1 SLT 9)

Topic 2: Radical Expressions and Equations
- Explore functions at large positive and negative values of x.
- Interpret end behavior of a variety of functions in multiple representations. (cK–12 Flexbook Unit 2 Topic 2 SLT 11)
- Interpret key features of polynomial functions given different representations. (cK–12 Flexbook Unit 2 Topic 2 SLT 12)
- Add and subtract polynomials graphically and symbolically. (cK–12 Flexbook Unit 2 Topic 2 SLT 13 & 14: Add, Subtract)
- Multiply polynomials graphically and symbolically. (cK–12 Flexbook Unit 2 Topic 2 SLT 13 & 14: Multiply)
- Graph polynomials in factored form. (cK–12 Flexbook Unit 2 Topic 2 SLT 15)
- Identify zeros of polynomial functions when suitable factorizations are available in order to graph the function and identify its key features. (cK–12 Flexbook Unit 2 Topic 2 SLT 16)

- Divide polynomial expressions using area models, partial quotients, and long division. ([cK–12 Flexbook Unit 2 Topic 2 SLT 17](#))
- Apply the Remainder Theorem and polynomial division to find the zeros of a polynomial function. ([cK–12 Flexbook Unit 2 Topic 2 SLT 18](#))
- Make connections among the equation, graph, and features of a polynomial function. ([cK–12 Flexbook Unit 2 Topic 2 SLT 19](#))
- Model a real-world situation using a polynomial function.

Topic 3: Rational Expressions and Equations

Unit 2 Topic 3 is taught in Marking Period 3 for Algebra 2 and Honors Algebra 2, and in the last weeks of the first year in Two-year Algebra 2. The SLTs and resources for this topic are still under construction. This Flexbook Links document will be updated to include details for Unit 2 Topic 3 by early November.