High School Algebra Playlist: Graphing Polynomials

Aligns with CCSS.Math.Content.HSF.IF.C.7.c: Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.

Related Standards

- CCSS.Math.Content.HSF.IF.A.1: Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.

- CCSS.Math.Content.HSA.SSE.B.3.a: Factor a quadratic expression to reveal the zeros of the function it defines.

- CCSS.Math.Content.HSF.IF.C.7: Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

Objectives

In this module, you will learn and practice the following skills:

- graph polynomial functions

- identify the end-behavior of polynomial functions

Let's get started!

Key Terms

- A **monomial** is an algebraic expression containing only one term.

- A **polynomial** is a monomial or the sum or difference of monomials.

- The **degree** of a polynomial in one variable is the exponent of the leading term.

Connections

- https://openstaxcollege.org/textbooks/algebra-and-trigonometry; section 1.4.1

- https://openstaxcollege.org/textbooks/algebra-and-trigonometry; section 5.3