High School Algebra Playlist: Graphing Linear and Quadratic Equations

Aligns with CCSS.Math.Content.HSF.IF.C.7.a: Graph linear and quadratic functions and show intercepts, maxima, and minima

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.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.

Wisewire

Objectives

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

- graph linear functions from their equations

- graph quadratic functions from their equations

Let's get started!

Key Terms

- A **linear function** is a polynomial of degree 1, typically written $y = mx + b.$

- A **quadratic function i**s a polynomial of degree 2, typically written $y = ax^2 + bx + c.$

- A **factor** is a number that is multiplied by another number or by an expression to make a product. In the context of quadratic expressions, factors are binomials.

- The **slope** of a line is its rate of change.

- The **x-intercept** is the point at which the graph of a function intersects the x-axis.

- The **y-intercept** is the point at which the graph of a function intersects the y-axis.

Connections

- https://openstaxcollege.org/textbooks/algebra-and-trigonometry; section 4.1

- https://openstaxcollege.org/textbooks/algebra-and-trigonometry; section 5.1