

Expectation

1.3 The student will model, analyze, and apply quadratic functions.

Essential Question

How do quadratic functions model real-world problems and their solutions?

Enduring Understanding

The characteristics of quadratic functions and their representations are useful in solving real-world problems.

Indicators

- 1.3.B.1 represent quadratic functions numerically, algebraically, and graphically and identify their properties.
- 1.3.B.2 analyze patterns of change in data to determine if a quadratic relationship appropriately models the data.
- 1.3.B.3 represent translations and dilations of quadratic functions numerically, algebraically, and graphically.
- 1.3.B.4 model data using quadratic functions.
- 1.3.B.5 simplify radical expressions.
- 1.3.B.6 solve quadratic equations by inverse operations, factoring, and the quadratic formula.
- 1.3.B.7 apply quadratic functions to real-world problems.
- 1.3.B.9 recognize the square root function as the inverse of the quadratic function.

Vocabulary

constant term

linear term

quadratic regression

quadratic term

zero-product principle