

22.0

1 CST item

Students use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x -axis in zero, one, or two points.

Key Vocabulary

Quadratic Formula

Factoring

Intersect

x -axis

Discriminant

Perfect Square

Real Solution

Imaginary Solution

Instructional Objectives

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| 1 Determine how many points of intersection the graph of a quadratic will have with the x -axis. | 1 | How many times does the graph of $y = x^2 - 5x - 14$ intersect the x axis? |
| | 2 | How many times does the graph of $y = -x^2 - 4$ intersect the x axis? |
| | 3 | How many times does the graph of $y = x^2 - 12x + 36$ intersect the x axis? |
| | 4 | How many times does the graph of $y = 2x^2 - 3x + 5$ intersect the x axis? |