



Completing the Square for Quadratics

Today's Standard

HSA.SSE.B3b - Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.

Cues	Notes
What is completing the square?	Completing the square is a method to rewrite a quadratic equation in vertex form.
How does completing the square help in finding the vertex?	It helps find the vertex by transforming the equation into a form where the vertex is easily identifiable.
What are the steps to complete the square?	Steps: 1. Move the constant term to the other side. 2. Add and subtract the square of half the coefficient of x. 3. Factor the perfect square trinomial. 4. Simplify.
Why is the vertex important?	The vertex represents the maximum or minimum value of the quadratic function.
How does the orientation of the parabola affect the vertex?	If the parabola opens upwards, the vertex is a minimum. If it opens downwards, the vertex is a maximum.

Summary

Completing the square transforms a quadratic equation into vertex form, making it easier to identify the vertex and understand the function's maximum or minimum value.