Completing the Square in Quadratics

Today's Standard

HSA.REI.B4a - Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.

Real-World Applications for this Standard

Physics: Calculating projectile motion paths.; Engineering: Designing parabolic structures.; Economics: Analyzing quadratic cost functions.; Biology: Modeling population growth.

Today I Learned

Today, we learned how to use a method called completing the square to solve quadratic equations. This method helps us find the solutions to these equations in a special way.

Common Stumbling Blocks

Sometimes, students think that using completing the square changes the answers to the problem, but it doesn't. They might also think it only works for some problems, but it works for all quadratic problems.

Quiz Me

- What is completing the square?
- Does completing the square change the solutions?
- Can completing the square be used for all quadratic equations?
- Why is completing the square important?
- What is the quadratic formula?

Help Me

Completing the square can help us solve problems in real life, like figuring out the path of a ball when you throw it or designing things like bridges and buildings. It makes solving these problems easier by changing the equation into a simpler form.