Remainder Theorem Application

Today's Standard

HSA.APR.B2 - Know and apply the Remainder Theorem: For a polynomial p(x) and a number a, the remainder on division by x - a is p(a), so p(a) = 0 if and only if (x - a) is a factor of p(x).

Real-World Applications for this Standard

Determining roots of polynomial equations in engineering problems; Predicting outcomes in financial models; Analyzing signal processing in telecommunications; Solving problems in coding theory

Today I Learned

Today, we learned about the Remainder Theorem in algebra. This theorem helps us understand how to find out if a number is a factor of a polynomial equation.

Common Stumbling Blocks

Sometimes, students think the Remainder Theorem only works for simple equations, but it works for all polynomials. Another mistake is thinking that p(a) = 0 for any number a, but it only works if x - a is a factor of the polynomial.

Quiz Me

- What is the Remainder Theorem?

- What happens if p(a) equals zero?

- Does the Remainder Theorem work for all polynomials?

- What do you need to know before using the Remainder Theorem?

- Can you give an example of the Remainder Theorem?

Help Me

The Remainder Theorem helps us find out if a number is a factor of a polynomial. For example, in engineering, it can help solve complex problems. In finance, it can help predict outcomes.