Solving Exponential Equations with Logarithms

Today's Standard

HSF.LE.A4 - For exponential models, express as a logarithm the solution to ab^ct = d where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.

Real-World Applications for this Standard

Calculating population growth rates; Determining radioactive decay; Analyzing financial investments and compound interest; Modeling the spread of diseases; Measuring sound intensity in decibels

Today I Learned

Today, we learned how to use logarithms to solve problems with exponential growth and decay. It's like using a special math tool to understand how things grow or shrink over time.

Common Stumbling Blocks

Some students think you can only use base 10 with logarithms, but you can also use bases 2 and e. Others mix up the rules for logarithms and exponents. We'll help them understand the differences.

Quiz Me

- What is an exponential model?
- What is a logarithm?
- Can you use bases other than 10 for logarithms?
- Why do we use technology to evaluate logarithms?
- Give an example of a real-world use of logarithms.

Help Me

Logarithms help us solve problems where things grow or shrink quickly, like how fast a population increases or how quickly something decays. We use special numbers called bases, and we can use tools like calculators to help us.