

Growth Patterns in Functions

Today's Standard

HSF.LE.A1a - Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.

Real-World Applications for this Standard

Population growth analysis; Financial interest calculations; Predicting sales trends; Modeling radioactive decay; Analyzing temperature changes over time

Today I Learned

Today, we learned about how different kinds of math functions grow. Linear functions grow by the same amount each time, and exponential functions grow by multiplying by the same number each time.

Common Stumbling Blocks

Some kids think that both linear and exponential functions grow the same way, but they don't. Linear functions add the same amount, while exponential functions multiply. Another mistake is thinking exponential functions always grow faster, but that's not true at first.

Quiz Me

- What is a linear function?
- What is an exponential function?
- How does a linear function grow?
- How does an exponential function grow?
- Can a linear function ever grow faster than an exponential function at first?

Help Me

Linear functions grow by adding the same amount each time, like saving the same amount of money every month. Exponential functions grow by multiplying, like bacteria doubling every hour. This helps us understand things like money and science better.