Function Fitting and Data Analysis

Today's Standard

HSS.ID.B6a - Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.

Cues	Notes
What is function fitting?	Function fitting involves finding a mathematical function that closely approximates a set of data points.
Why is context important in choosing a function?	The context of the data helps determine the most appropriate type of function to use (linear, quadratic, exponential).
What are residuals?	Residuals are the differences between observed data points and the values predicted by the model.
How do linear, quadratic, and exponential models differ?	Linear models show constant rates of change, quadratic models show parabolic trends, and exponential models show rapid growth or decay.
What are common misconceptions in function fitting?	Common misconceptions include thinking any function can fit any data and believing function fitting is always precise.

Summary

Function fitting is about finding the best function to represent data, considering the context. It's important to understand residuals and the differences between linear, quadratic, and exponential models. Common misconceptions include misapplying functions and overestimating model precision.