Understanding Slope and Line Equations

Today's Standard

8.EE.B6 - Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.

Real-World Applications for this Standard

Analyzing the slope of a wheelchair ramp to ensure it's accessible.; Determining the steepness of a roof for construction purposes.; Understanding and predicting the trajectory of a thrown object.; Graphing linear relationships in economics, such as supply and demand curves.

Today I Learned

Today we learned about slopes and how to write equations for lines on a graph. We used triangles to show why the slope stays the same between two points.

Common Stumbling Blocks

Some kids might think the slope changes between different points on the same line, but it doesn't. Others might mix up the slope and the y-intercept, which are different things.

Quiz Me

- What is a slope?
- What does the equation y = mx represent?
- What is the y-intercept?
- How can we use triangles to understand slopes?
- What does the equation y = mx + b represent?

Help Me

A slope tells us how steep a line is. We can use it to understand things like how steep a hill is or how fast something is moving. The equation y = mx + b helps us draw lines on a graph and understand their steepness and where they start on the graph.