



Modeling Linear Relationships

Today's Standard

8.F.B4 - Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

Cues	Notes
What is a linear function?	A linear function models a relationship between two quantities where the rate of change is constant.
How to determine the rate of change?	The rate of change (slope) is determined by the change in y divided by the change in x between two points.
What is the initial value?	The initial value (y -intercept) is the value of y when x is zero.
How to interpret a graph?	Graphs visually represent the relationship between variables; the slope shows the rate of change, and the y -intercept shows the initial value.
How to read a table of values?	Tables of values list pairs of x and y values; these can be used to identify the slope and y -intercept.

Summary

Understanding linear functions involves constructing them from relationships between quantities, determining their rate of change and initial value, and interpreting these elements within graphs and tables.