Chapter 3 - Algebra and Functions

SAT Math focuses on algebra, problem-solving, and data analysis. Key skills include linear equations, systems of equations, and interpreting graphs.

Linear equations: y = mx + b. Slope m = rise/run. Understanding slope is foundational for both SAT math and machine learning (gradients).

Systems of equations: Solving for multiple unknowns. In ML, we often solve systems when finding optimal parameters (e.g., normal equation for linear regression).

Exponential growth: y = a * b^x. Appears in SAT word problems and in ML (e.g., learning rate decay).

From SAT to ML

The algebra you learn for SAT - functions, graphs, rates of change - directly applies to understanding machine learning. A gradient is essentially a slope in higher dimensions.

Practice interpreting graphs: slope, intercepts, and trends. These skills transfer to understanding loss curves and model performance.