

# Nathan's Big Book Of Math

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# Part I

## Real Analysis



# Chapter 1

## Measure Theory

hello





# Part II

## Ordinary Differential Equations



hello



# Part III

## Optimization



# Chapter 2

## Line Search Methods

### 2.1 Wolfe Conditions

Condition 2.1.1: Armijo Condition

$$f(x_k + \alpha p_k) \leq f(x_k) + c_1 \alpha \nabla f_k^T p_k, \quad c \in (0, 1)$$





# **Part IV**

## **Control Theory**



# List of Figures



## List of Tables