

# A Simple LaTeX Article

JaxEdit Project

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## 0.1 Long Introduction

We have the Cauchy-Schwarz inequality:

$$\left(\sum_{k=1}^n a_k b_k\right)^2 \leq \left(\sum_{k=1}^n a_k^2\right) \left(\sum_{k=1}^n b_k^2\right)$$

where  $a_k$  and  $b_k$  are real numbers, for any  $k$ .

## 0.2 Calculus

**Theorem 1** *If we have the following conditions:*

1.  $f(x)$  is continuous on  $[a, b]$ ,
2.  $f(x)$  is differentiable on  $(a, b)$ ,
3.  $f(a)$  and  $f(b)$  are equal,

*Then there exists  $\xi \in (a, b)$  such that  $f'(\xi) = 0$ .*