Test LaTeX Document

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1 Introduction

This is a test LaTeX document to verify that the PDF conversion script works correctly. This document includes various LaTeX features to ensure proper compilation.

2 Mathematical Equations

Here are some mathematical expressions to test:

2.1 Inline Math

The quadratic formula is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$, which is used to solve equations of the form $ax^2 + bx + c = 0$.

2.2 Display Math

Einstein's famous equation:

$$E = mc^2$$

The integral of a function:

$$\int_{a}^{b} f(x) dx = F(b) - F(a)$$

2.3 Multi-line Equations

Using the align environment:

$$f(x) = x^2 + 2x + 1 (1)$$

$$=(x+1)^2\tag{2}$$

3 Lists

3.1 Itemized List

- First item
- Second item
- Third item with nested list:
 - Nested item 1
 - Nested item 2

3.2 Enumerated List

- 1. First step
- 2. Second step
- 3. Third step

4 Tables

Here's a simple table:

Name	Age	Score
Alice	25	95
Bob	30	87
Charlie	28	92

Table 1: Sample data table

5 Cross-References

This section demonstrates cross-referencing. As shown in Table 1, we have sample data. This is why we run pdflatex twice!

6 Code and Verbatim

```
Here's some inline code: printf("Hello, World!");.
#include <stdio.h>
int main() {
    printf("Hello, World!\n");
    return 0;
}
```

7 Conclusion

This test document includes:

- Mathematical equations
- Lists (itemized and enumerated)
- Tables
- Cross-references
- Code snippets

If this document compiles successfully to PDF, the processor script is working correctly!