Test 1 Title

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1 LaTeX Math in Markdown

This document demonstrates how to use LaTeX math equations in Markdown.

1.1 Inline Math Equations

You can include inline equations like this: $E = mc^2$ or (F = ma) within your text.

1.2 Display Math Equations

For standalone equations, use double dollar signs:

$$\int_a^b f(x)\,dx = F(b) - F(a)$$

Or use the equation environment:

$$\frac{d}{dx}\left(\int_a^x f(t)\,dt\right) = f(x) \tag{1}$$

1.3 Matrix Example

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} ax + by \\ cx + dy \end{pmatrix}$$

1.4 Aligned Equations

$$\begin{aligned} a &= b + c && (2)\\ &= d + e + f && (3)\\ &= g + h && (4) \end{aligned}$$

1.5 Fractions and Summations

$$\sum_{i=1}^{n} \frac{1}{i^2} = \frac{\pi^2}{6}$$

1.6 Chemical Equations

If you have the mhchem package included:

$$H_2O + CO_2 \longrightarrow H_2CO_3$$

1.7 Greek Letters

Alpha: α, Beta: β, Gamma: γ, Delta: δ, Epsilon: ϵ

1.8 Theorem Environment

Theorem 1. *For a right triangle with sides a, b and hypotenuse c:*

$$a^2 + b^2 = c^2$$

1.9 Proof Environment

Proof. This is a proof of the Pythagorean theorem. □

2 Regular Markdown Features

- Bullet points
- Work normally

1. Numbered lists
2. Also work

Bold text and *italic text* are supported.

> Blockquotes work as expected.

Tables work too:

Column 1	Column 2	Column 3
Cell 1	Cell 2	Cell 3
Cell 4	Cell 5	Cell 6

Code blocks are supported:

```
[] def hello_world(): print("Hello, world!")
```