Hello world!

I'm a test Markdown document.

Here's some bold text and here's some italic text. This is inline code.

Markdown Tables

| First Name | Last Name | Location | Allegiance |
|------------|-----------|-------------------|-----------------|
| Mance | Rayder | North of the Wall | Wildlings |
| Margaery | Tyrell | The Reach | House Tyrell |
| Danerys | Targaryen | Meereen | House Targaryen |
| Tyrion | Lannister | King's Landing | House Lannister |

Code blocks

```
This code is in a code block.
```

Here's a syntax-highlighted code block:

```
#!/usr/bin/env python3
import sys

if __name__ == '__main__':
    print('This is highlighted Python code!')
    sys.exit(0)
```

Page Layout with LATEX Commands

Here's a forced page break.

LaTeX support

This document supports inline LATEX!

Here's the proof: $\frac{n!}{k!(n-k)!} = \binom{n}{k}$

Creating a footnote is easy.¹

Here's an equation:

$$x = a_0 + \cfrac{1}{a_1 + \cfrac{1}{a_2 + \cfrac{1}{a_3 + \cfrac{1}{a_4}}}}$$

Here are some numbered equations:

$$f(x) = (x+a)(x+b) \tag{1}$$

$$5^2 - 5 = 20 \tag{2}$$

$$a = bq + r \tag{3}$$

Here's some multi-line math stuff:

$$u(x) = \begin{cases} \exp x & \text{if } x \ge 0\\ 1 & \text{if } x < 0 \end{cases}$$

$$f(x) = (x+a)(x+b)$$
$$= x2 + (a+b)x + ab$$

 $^{^{1}\}mathrm{An}$ example footnote.