

# Simple Markdown with Mathematical Formulas

This document demonstrates math formulas that can be processed nicely with Prince XML.

## Inline Formulas

The area of a circle is  $A = \pi r^2$ , where  $r$  is the radius.

Energy and mass are related by Einstein's equation:  $E = mc^2$ .

The speed of light is approximately  $c \approx 3 \times 10^8$  m/s.

## Display (Block) Formulas

The quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Pythagorean theorem:

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

The famous limit definition of  $e$ :

$$e = \lim_{n \rightarrow \infty} \left( 1 + \frac{1}{n} \right)^n$$

## Another Example

The derivative of  $f(x) = x^2$  is  $f'(x) = 2x$ .

These formulas use standard LaTeX syntax inside Markdown.

For best results with Prince, convert this Markdown to HTML first (using Pandoc recommended), then run Prince on the HTML file.

You can add as many formulas as you like using  $\$ . . . \$$  or  $\$\$ . . . \$\$$ .