This document has a little bit of text, and a little bit of equations.

First, we can put really simple mathematical expressions like π or $\sin(x)$ into the text by surrounding them with dollar signs. We can put simple equations into the text in the same way, like this: $y = 2x$.

But if we want to display a complicated mathematical expression, we really ought to place it on a line all by itself. Surround the equation with pairs of dollar signs, like this:

$$y = A\sin(\omega t) + B\cos(\omega t)$$