# A LaTeX Test Document

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## 1 `The Crisis' by Thomas Paine

These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands by it now, deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph. What we obtain too cheap, we esteem too lightly: it is dearness only that gives every thing its value....

## 2 Math

Here's a simple equation: $\cos^2 \varphi + \sin^2 \varphi = -e^{i\pi}$ and here is a an equation with a sum: $\frac{1}{n} \sum_{i=1}^{n} (x_i - \mu)$. We follow these up with a 'display equation' as shown below:

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

Let's do some typesetting of number, for example: 11 and 17. Now, here's how those look in math mode: 11 and 17. Are they any different? If so, which looks better?

## 3 Programming

And here is some verbatim:

```
import math
x = math.cos(2*math.pi)
l = 1.1 * tan(x)
print "Can you tell the difference between O and 0?"
print "How about 1 and l?"
```