

**REAL-TIME L<sup>A</sup>T<sub>E</sub>X DEMONSTRATION**  
**MARCH 2, 1998**

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Here is some *emphasized* text.

And, now, some mathematics  $\alpha$  that is in a paragraph.  $\beta$  *Here is some text typeset in math mode.*

And, again, with **displayed math mode**:

$\alpha\beta$  *And, as before, some text.*

But, this time it is not a part of the paragraph.

And, as before, some text.

the, if, floor. the, if, floor. the, if, floor. the, if, floor. the, if, floor.

the, if, floor. the, if, floor. the, if, floor. the, if, floor. the, if, floor.

the, if, floor. the, if, floor. the, if, floor. the, if, floor.

Here are some math symbols that I know:

$\rightarrow \Rightarrow \leftarrow \Leftarrow \diamond \heartsuit$

Font	Example
regular	$x$
mathit	$x$
mathrm	$x$
mathbf	$\mathbf{x}$
mathsf	$x$
mathtt	$x$
regular	$X$
mathbb	$\mathbb{X}$
mathcal	$\mathcal{X}$
regular	$+$
boldsymbol	$\mathbf{+}$
mathbf	$\mathbf{+}$

$$\begin{pmatrix} 0 & 1 \\ 2 & 3 \end{pmatrix}$$

$$\left\{ \begin{array}{ccc} 0 & 1 & 2 \\ 3 & 4 & x^2 \end{array} \right\|$$

Here is a matrix that is typeset in a paragraph.  $|\begin{smallmatrix} 0 & 1 \\ 2 & 3 \end{smallmatrix}| = \det(\begin{smallmatrix} 0 & 1 \\ 2 & 3 \end{smallmatrix})$  See, isn't that neat?

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Next, we look at fractions:  $\frac{\alpha}{1+\infty}$  and roots  $\sqrt{\beta}$  and  $\sqrt[3]{1 + \frac{1+x}{1+\alpha}}$

Superscripts and subscripts:  $\sigma_3$  and  $\sigma^3$ .

What will `\sigma^3.14` yield? Answer:  $\sigma^3.14$ .

$$\alpha_{\gamma\epsilon}^{\beta}$$

Sums, etc.:

inline:  $\sum_{i=0}^{i=100}$

displayed:

$$\sum_{i=0}^{i=100}$$