

**For professional typesetting
of mathematics formulas with T_EX use**

~~MathTime~~ *MathTime Professional!*

Switch to *MathTime*TM *Professional* because

1. **L^AT_EX style files** incorporating these new fonts are already available, providing a template for adopting your own special L^AT_EX style files.
2. The *MathTime Professional* fonts have **individually designed fonts** for superscripts and second order superscripts. So eye-sore formulas like

$$A'_{\alpha_1 \dots \alpha_k}{}^{\beta_1 \dots \beta_l} = \sum_{\substack{i_1, \dots, i_k \\ j_1, \dots, j_l}} A_{i_1 \dots i_k}{}^{j_1 \dots j_l} \frac{\partial x^{i_1}}{\partial x'^{\alpha_1}} \dots \frac{\partial x^{i_k}}{\partial x'^{\alpha_k}} \frac{\partial x'^{\beta_1}}{\partial x^{j_1}} \dots \frac{\partial x'^{\beta_l}}{\partial x^{j_l}}$$

are now much more readable

$$A'_{\alpha_1 \dots \alpha_k}{}^{\beta_1 \dots \beta_l} = \sum_{\substack{i_1, \dots, i_k \\ j_1, \dots, j_l}} A_{i_1 \dots i_k}{}^{j_1 \dots j_l} \frac{\partial x^{i_1}}{\partial x'^{\alpha_1}} \dots \frac{\partial x^{i_k}}{\partial x'^{\alpha_k}} \frac{\partial x'^{\beta_1}}{\partial x^{j_1}} \dots \frac{\partial x'^{\beta_l}}{\partial x^{j_l}}$$

(Both formulas are in 11 point type; in 10 point type the first (old *MathTime*) version is especially cramped.)

3. The *MathTime Professional* fonts will have a **continuing series of enhancements** while no no further development will be done on the old *MathTime* fonts. In addition to the symbols provided by the basic *MathTime Professional* package, which comprise all the standard T_EX symbols, including bold versions, as well as heavy (extra-bold) versions of the operator symbols,

$a, \dots, Z, \alpha, \dots, \omega, \alpha, \dots, \omega, \Gamma, \dots, \Omega, \Gamma, \dots, \Omega + - \times \div \pm \oplus \subseteq \leq \ll \approx \rightarrow \uparrow \infty \emptyset \forall \exists \cup \cap \wedge \nabla \int \Sigma$
a, a, ..., Z, Z, α, ..., ω, α, ..., ω, Γ, ..., Ω, Γ, ..., Ω + - x ÷ ± ⊕ ⊆ ≤ ≪ ≈ → ↑ ∞ ∅ ∀ ∃ ∪ ∩ ∧ ∇ ∫ ∑
+ - x ÷ ± ⊕ ⊆ ≤ ≪ ≈ → ↑ ∞ ∅ ∀ ∃ ∪ ∩ ∧ ∇ ∫ ∑

a supplementary package will soon be released containing all the extra symbols of the sort found in the AMS's msam and msbm fonts

$\boxplus \diamond \cup \parallel \rightarrow \leftarrow \leftrightarrow \leq \geq \leq \in \notin \subseteq \supseteq \cup \cap \int \Sigma$

which will also be available in **bold and heavy versions**.

Moreover, instead of the AMS's "blackboard bold" font, available only for upper-case letters, there will be two different "blackboard bold" fonts, available in both upper- and lower-case

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789
 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789

as well as darker versions

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789
 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789

The next supplementary package, due out by the end of the year, will provide a choice of several **script fonts**, as well as a **German fraktur** font. Further supplements will be issued as STIX provides new characters that users may want.

In addition, Personal T_EX Inc. has a **font forum** where users of the *MathTime Professional* fonts may make further suggestions, and request other symbols.

(OVER)

4. The *MathTime Professional* fonts provide all sorts of **superior typesetting effects** not obtainable with other font sets. For example, instead of resorting to “extensible” parentheses, with straight portions

$$\left(\begin{array}{ccc} A_{11} & \dots & A_{1n} \\ A_{21} & \dots & A_{2n} \\ & \ddots & \\ A_{n1} & \dots & A_{nn} \end{array} \right)$$

there are individually designed curved parentheses, and other delimiters, up to 4 inches high

$$\left(\begin{array}{ccc} A_{11} & \dots & A_{1n} \\ A_{21} & \dots & A_{2n} \\ & \ddots & \\ A_{n1} & \dots & A_{nn} \end{array} \right) \quad \left\langle \begin{array}{ccc} A_{11} & \dots & A_{1n} \\ A_{21} & \dots & A_{2n} \\ & \ddots & \\ A_{n1} & \dots & A_{nn} \end{array} \right\rangle$$

as well as individually designed square roots up to 4 inches high so that

$$\sqrt{\frac{\sum_{i=1}^n (x_i - y_i)^2}{1 + \sum_{i=1}^n (x_i + y_i)^2}} \quad \text{can be set as} \quad \sqrt{\frac{\sum_{i=1}^n (x_i - y_i)^2}{1 + \sum_{i=1}^n (x_i + y_i)^2}}$$

Similarly, math accents are provided up to 4 inches wide

$$\overbrace{A + B + C + D + E + F + G} + \overbrace{H + I + J + K + L + M + N}$$

Other enhancements include the symbols

$$\iint \iiint \oint \oiint \oplus \ominus \int$$

and, **as requested in the font forum**, various extra large sizes of all the “large operators”, for special occasions

$$\sum_{i \notin I} \frac{\int_{-\infty}^{\infty} f(\alpha_i x) dx + 1}{\oint_C f(\beta_i z) dz - 1} \quad \int_{-\infty}^{\infty} \frac{\sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i x)}}{1 - \delta_i}}{\beta_i + \sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i x)}}{1 - \delta_i}} dx$$

$$\int_{-\infty}^{\infty} \frac{\sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i x)}}{1 - \delta_i}}{\beta_i + \sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i x)}}{1 - \delta_i}} dx \quad \oiint_{\partial M} \frac{\sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i \mathbf{x})}}{1 - \delta_i}}{\beta_i + \sum_{i=1}^{\infty} \frac{\delta_i \cdot e^{f(\sum_{i=1}^{\infty} \alpha_i \mathbf{x})}}{1 - \delta_i}} dS(\mathbf{x})$$