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The commands in each column are equivalent. The commands in the first column typeset $\langle argument \rangle$ as a subscript, and those in the second column typeset $\langle argument \rangle$ as a superscript. The \sb and \sp commands are mainly useful if you're working on a terminal that lacks an underscore or caret, or if you've redefined '_' or '^' and need access to the original definition. These commands are also used for setting lower and upper limits on summations and integrals.

If a subscript or superscript is not a single token, you need to enclose it in a group. TEX does not prioritize subscripts or superscripts, so it will reject formulas such as a_i_j, a^i^j, or a^i_j.

Subscripts and superscripts are normally typeset in script style, or in scriptscript style if they are second-order, e.g., a subscript on a subscript or a superscript on a subscript. You can set *any* text in a math formula in a script or scriptscript style with the \scriptstyle and \scriptscriptstyle commands (p. '\scriptscriptstyle').

You can apply a subscript or superscript to any of the commands that produce named mathematical functions in roman type (see p. 'namedfns'). In certain cases (again, see p. 'namedfns') the subscript or superscript appears directly above or under the function name as shown in the examples of \lim and \det below.

Example:

$$$x_3 \quad t_{\max} \quad a_{i_k} \quad \sum_{i=1}^n_{q_i} \quad x^3\quad e^{t \cosh\theta} \quad r^{x^2}\quad \int_{0^\infty}f(x)\,dx}$$

\$\$\lim_{x\leftarrow0}f(x)\qquad\det^{z\in A}\qquad\sin^2t\$\$
oroduces:

$$x_3$$
 t_{max} a_{i_k} $\sum_{i=1}^n q_i$ x^3 $e^{t\cos\theta}$ r^{x^2} $\int_0^\infty f(x) dx$
$$\lim_{x \to 0} f(x) \quad \det^{z \in A} \quad \sin^2 t$$