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\asymp	<code>\asymp</code>	\gg	<code>\gg</code>	\bowtie	<code>\bowtie</code>
\cong	<code>\cong</code>	\ll	<code>\ll</code>	\propto	<code>\propto</code>
\dashv	<code>\dashv</code>	\models	<code>\models</code>	\approx	<code>\approx</code>
\vdash	<code>\vdash</code>	\neq	<code>\neq</code>	\sim	<code>\sim</code>
\perp	<code>\perp</code>	\neq	<code>\neq</code>	\simeq	<code>\simeq</code>
\mid	<code>\mid</code>	\notin	<code>\notin</code>	\frown	<code>\frown</code>
\parallel	<code>\parallel</code>	\in	<code>\in</code>	\smile	<code>\smile</code>
\doteq	<code>\doteq</code>	\ni	<code>\ni</code>	\subset	<code>\subset</code>
\equiv	<code>\equiv</code>	\owns	<code>\owns</code>	\subseteq	<code>\subseteq</code>
\geq	<code>\geq</code>	\prec	<code>\prec</code>	\supset	<code>\supset</code>
\geq	<code>\geq</code>	\preceq	<code>\preceq</code>	\supseteq	<code>\supseteq</code>
\leq	<code>\leq</code>	\succ	<code>\succ</code>	\sqsubset	<code>\sqsubset</code>
\leq	<code>\leq</code>	\succeq	<code>\succeq</code>	\sqsupseteq	<code>\sqsupseteq</code>

These commands produce the symbols for various relations. Relations are one of T_EX's classes of math symbols. T_EX puts different amounts of space around different classes of math symbols. When T_EX needs to break a line of text within a math formula, it will consider placing the break after a relation—but only if the relation is at the outermost level of the formula, i.e., not enclosed in a group.

In addition to the commands listed here, T_EX treats ‘=’ and the “arrow” commands (p. ‘arrows’) as relations.

Certain relations have more than one command that you can use to produce them:

- ‘ \geq ’ (`\geq` and `\geq`).
- ‘ \leq ’ (`\leq` and `\leq`).
- ‘ \neq ’ (`\neq`, `\neq`, and `\not=`).
- ‘ \ni ’ (`\ni` and `\owns`).

You can produce negated relations by prefixing them with `\not`, as follows:

\nasymp	<code>\not\asymp</code>	\nleq	<code>\not\leq</code>	\nsimeq	<code>\not\simeq</code>
\ncong	<code>\not\cong</code>	\nprec	<code>\not\prec</code>	\nsubset	<code>\not\subset</code>
\nequiv	<code>\not\equiv</code>	\npreceq	<code>\not\preceq</code>	\nsubseteq	<code>\not\subseteq</code>
\neq	<code>\not=</code>	\nsucc	<code>\not\succ</code>	\nsupset	<code>\not\supset</code>
\ngeq	<code>\not\geq</code>	\nsucceq	<code>\not\succeq</code>	\nsupseteq	<code>\not\supseteq</code>
\ngeq	<code>\not\geq</code>	\napprox	<code>\not\approx</code>	\nqsubset	<code>\not\sqsubset</code>
\nleq	<code>\not\leq</code>	\nsim	<code>\not\sim</code>	\nqsupseteq	<code>\not\sqsupseteq</code>

Example:

We can show that $AB \perp AC$, and that $\triangle ABF \not\sim \triangle ACF$.

produces:

We can show that $AB \perp AC$, and that $\triangle ABF \not\sim \triangle ACF$.