# Math-Symbols-in-LATEX-Manual

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Version: v2.2.0.1230, Last Update: December 30, 2019

Insert  $\usepackage{math-symbols}$  in your document's preamble.

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#### 2.3 Transposed Matrix Notations

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### 2.4 Special Vector and Matrix Notations

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### 3 Useful Functions and Operators

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### 4 Useful Aliases and Generators

- \fracdiff{}{}: frac & diff operator, also provide \dfracdiff{}{} mode. For example, \fracdiff{u}{x} gets  $\frac{du}{dx}$ , \dfracdiff{^2u}{x^2} gets  $\frac{d^2u}{dx^2}$
- \fracdiffs{}: special frac & diff operator. For example, \fracdiffs{x} gets  $\frac{d}{dx}$ , \dfracdiffs{y} gets  $\frac{d}{dy}$
- \fracpartial{}{}: frac & partial operator, also provide \dfracpartial{}{} mode. For example, \fracpartial{u}{x} gets  $\frac{\partial u}{\partial x}$ , \dfracpartial{^2u}{x^2} gets  $\frac{\partial^2 u}{\partial x^2}$
- \fracpartials{}: special frac & partial operator. For example, \fracpartials{x} gets  $\frac{\partial}{\partial x}$ , \dfracpartials {y} gets  $\frac{\partial}{\partial y}$
- \mclosuresquare{}, \mclosuresquare{}: auto height brackets, eg  $\left\{\left[\left(a^2+b^2\right)^2\right]^2\right\}$
- \mfwhen{}{}: create a symbol |, eg \mfwhen{\fracpartial{u}{t}}{x=5} gets  $\frac{\partial u}{\partial t}\Big|_{x=5}$
- \mvct{}{}, \mvctz{}{}: row vector creator, eg \mvct{a}{n} gets  $(a_1, a_2, ..., a_n)$ , \mvctz{a}{n} gets  $(a_0, a_1, ..., a_n)$
- \mvctt{}{}, \mvctzt{}{}: column vector creator, eg \mvctt{a}{n} gets  $(a_1, a_2, ..., a_n)^T$ , \mvctzt{a}{n} gets  $(a_0, a_1, ..., a_n)^T$
- \mequlist{}: provided a list of equations, eg \mequlist{x + y &= 10 \\ 4x + 2y &= 30} gets  $\begin{cases} x + y = 10 \\ 4x + 2y = 30 \end{cases}$  also provide environment equlist, which is similar with the cases environment

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