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Standard $\LaTeX{}$ practice is to write inline math by enclosing it between \verb|\(...\)|: In physics, the mass-energy equivalence is stated by the equation $E=mc^2$, discovered in 1905 by Albert Einstein. Instead of writing (enclosing) inline math between \verb|\(...\)| you can use $\texttt{\$...\$}$ to achieve the same result: In physics, the mass-energy equivalence is stated by the equation $E=mc^2$, discovered in 1905 by Albert Einstein. Or, you can use \verb|\begin{math}...\end{math}|: In physics, the mass-energy equivalence is stated by the equation \begin{math} E=mc^2 \end{math}, discovered in 1905 by Albert Einstein. In $\LaTeX$, you can write the element of symbol ($\in$) using the \in command. The following examples show how to write the element of symbol in $\LaTeX$. How to Write the Element Of Symbol in Text We can use the \in command to write the element of symbol in a sentence. For example, the number x is an element of set A: $$ x \in A $$ A similar expression can be written for a function A_x: $$ A_x \in S_n $$ This symbol is also printed by other packages, where you may get slight differences in the output. Package Command Output None $\in$ mathabx $\in$ fdsymbol $\in$ boisik $\in$ stix $\in$ The Not Element of ($\not\in$) symbol is also known as Not Belongs to, Not Element of, or Not Member of symbol. In order to get this symbol in $\LaTeX$, you can use the default command otin. For example: $$ x \otin A $$ A similar expression can be written for a function A_x: $$ A_x \otin S_n $$ This symbol can be also printed by other packages, where you may get slight differences in the output. Package Command Output None $otin$ None $ot\in$ mathabx $otin$ fdsymbol in boisik $otin$ stix $otin$ All the predefined mathematical symbols from the $\TeX$ package are listed below. More symbols are available from extra packages. Greek letters Symbol LaTeX Symbol LaTeX A {\displaystyle \mathrm {A} } and α {\displaystyle \alpha } \Alpha and \alpha N {\displaystyle \mathrm {N} } and ν {\displaystyle u } \Nu and u B {\displaystyle \mathrm {B} } and β {\displaystyle \beta } \Beta and \beta Ξ {\displaystyle \Xi } and ξ {\displaystyle \xi } \Xi and \xi Γ {\displaystyle \Gamma } and γ {\displaystyle \gamma } \Gamma and \gamma O {\displaystyle \mathrm {O} } and o {\displaystyle \mathrm {o} } \Omicron and \omicron Δ {\displaystyle \Delta } and δ {\displaystyle \delta } \Delta and \delta Π {\displaystyle \Pi } , π {\displaystyle \pi } and ϖ {\displaystyle \varpi } \Pi, \pi and \varpi E {\displaystyle \mathrm {E} } , ϵ {\displaystyle \epsilon } and ε {\displaystyle \varepsilon } \Epsilon, \epsilon and \varepsilon P {\displaystyle \mathrm {P} } , ρ {\displaystyle \rho } and ϱ {\displaystyle \varrho } \Rho, \rho and \varrho Z {\displaystyle \mathrm {Z} } and ζ {\displaystyle \zeta } \Zeta and \zeta Σ {\displaystyle \Sigma } , σ {\displaystyle \sigma } and ς {\displaystyle \varsigma \,} \Sigma, \sigma and \varsigma H {\displaystyle \mathrm {H} } and η {\displaystyle \eta } \Eta and \eta T {\displaystyle \mathrm {T} } and τ {\displaystyle \tau } \Tau and \tau Θ {\displaystyle \Theta } , θ {\displaystyle \theta } and ϑ {\displaystyle \vartheta } \Theta, \theta and \vartheta Y {\displaystyle \Upsilon } and υ {\displaystyle \upsilon } \Upsilon and \upsilon I {\displaystyle \mathrm {I} } and ι {\displaystyle \iota } \Iota and \iota Φ {\displaystyle \Phi } , ϕ {\displaystyle \phi } , and φ {\displaystyle \varphi } \Phi, \phi and \varphi K {\displaystyle \mathrm {K} } , κ {\displaystyle \kappa } and ϰ {\displaystyle \varkappa } \Kappa, \kappa and \varkappa X {\displaystyle \mathrm {X} } and χ {\displaystyle \chi } \Chi and \chi Λ {\displaystyle \Lambda } and λ {\displaystyle \lambda } \Lambda and \lambda Ψ {\displaystyle \Psi } and ψ {\displaystyle \psi } \Psi and \psi M {\displaystyle \mathrm {M} } and μ {\displaystyle \mu } \Mu and \mu Ω {\displaystyle \Omega } and ω {\displaystyle \omega } \Omega and \omega Archaic Greek letters Symbol LaTeX F {\displaystyle \mathrm {\Digamma} } \Digamma ϝ {\displaystyle \digamma } \digamma Unary operators Unary operators Symbol LaTeX Comment Symbol LaTeX Comment Symbol LaTeX Comment Symbol LaTeX Comment + {\displaystyle +\,} + − {\displaystyle -\,} - negation ! {\displaystyle !\,} ! factorial # {\displaystyle \#} \# primorial ¬ {\displaystyle eg } eg not Relation operators Relation operators Symbol LaTeX Comment Symbol LaTeX Comment < {\displaystyle {\displaystyle >\,} > is greater than ≮ {\displaystyle less } less is not less than ≯ {\displaystyle gtr } gtr is not greater than ≤ {\displaystyle \leq } \leq is less than or equal to ≥ {\displaystyle \geq } \geq is greater than or equal to ⩽ {\displaystyle \leqslant } \leqslant is less than or equal to ⩾ {\displaystyle \geqslant } \geqslant is greater than or equal to ≰ {\displaystyle leq } leq is neither less than nor equal to ≱ {\displaystyle geq } geq is neither greater than northe given text is a list of mathematical symbols and their corresponding LaTeX code. the list includes various categories such as binary operators, relations, and logical symbols. some examples from the list include: * ± for plus or minus * ∩ for set intersection * ∈ for "is member of" * ⊨ for models the list is quite extensive, covering a wide range of mathematical concepts and symbols.The set of real numbers C {\displaystyle \mathbb {C} } \C represents the complex numbers, which can be thought of as points in a two-dimensional plane. Similarly, the set of quaternions O {\displaystyle \mathbb {O} } \mathbb{H} represents the three-dimensional space with one time axis and four spatial dimensions. In the world of mathematics, symbols and notations play a crucial role in representing complex concepts. From basic arithmetic operations to advanced mathematical functions, understanding the meanings behind these symbols is essential for any aspiring mathematician or scientist. Subscripts and Superscripts in LaTeX #### Introduction Subscripts and superscripts are used extensively in mathematical typesetting to represent exponents, indices, and limits of summations. LaTeX provides a straightforward way to create subscripts and superscripts using the underscore `_` and caret `^` symbols. #### Creating Subscripts and Superscripts - **Subscripts**: The underscore `_` symbol is used to set subscripts. For example, `x_1`, `y_i`, or `z_j`. - **Superscripts**: The caret `^` symbol is used for superscripts. For instance, `x^2`, `y^3`, or `z^n`. #### Combining Subscripts and Superscripts Both `_` and `^` can be combined in the same expression. For example: \[a_1^2 + a_2^2 = a_3^2 \] In cases where the expression contains long superscripts or subscripts, these need to be collected in braces to avoid LaTeX applying the commands `^` and `_` only to the following character. #### Examples - **Simple Usage**: ``` \[\int\limits_0^1 x^2 + y^2 \ dx \] \vspace{1cm} Using superscript and subscript in the same expression: \[a_1^2 + a_2^2 = a_3^2 \] ``` - **Longer Subscripts and Superscripts**: ``` \[x^{2 \alpha} - 1 = y_{ij} + y_{ij} \] ``` - **Nested Subscripts and Superscripts**: ``` \[(a^n)^{r+s} = a^{nr+ns} \] ``` - **Mathematical Equations with Subscripts and Superscripts**: ``` \[\sum_{i=1}^{\infty} \frac{1}{n^s} = \prod_p \frac{1}{1 - p^{-s}} \] ``` #### Additional Examples LaTeX markup for various mathematical operators with subscripts and superscripts includes: - **Integral**: `\int` - **Summation**: `\sum` - **Product**: `\prod` - **Union**: `\cup` - **Intersection**: `\cap` - **Cup** and **Cap**: Large cup and cap symbols. #### Further Reading For more detailed information, visit the LaTeX documentation or reference guides provided by Overleaf.Mathematical Symbols and Notations: A Comprehensive Guide The world of mathematics is filled with a vast array of symbols, notations, and operators that help mathematicians and scientists convey complex ideas in a concise manner. From basic arithmetic to advanced calculus, these symbols play a crucial role in facilitating communication and understanding. The symbol $\in$ is used to indicate that an expression on the left-hand side of the symbol belongs to or is in the set on the right-hand side of the symbol. This means that the variable is a member of the set of real numbers denoted by the symbol . For example, $x \in]-\infty,\infty[$ means that x is a real number between negative infinity and positive infinity. ###ARTICLEThe greater than or similar to symbol in LaTeX is a crucial function that serves as the characteristic of various spaces such as L^1, L^2, L^p and L^∞ in LaTeX. To express classical sets in LaTeX, one can use $\mathbb{ R }$, amsfonts or $\mathbf {R}$. For partial derivatives of functions with multiple variables in LaTeX, the syntax is straightforward. To create a table in Latex, start with \begin{tabular} and end it with \end{tabular}. A formula can be boxed in Latex using \boxed{} . An angle can be written in latex as langle, rangle, wedge or measuredangle for certain angles. An algorithm in LaTeX is expressed by \usepackage{algorithm},\usepackage{algorithmic}. Vectors are expressed in Latex with \vec,\overrightarrow