

Mathematic Symbols

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1 Basic Features

Basic features of formulas, e.g. How to place formulas properly.

Inline formulas example Words before $B(a, b)$ words after.

Newline formulas example Newline formulas example. Words before

$$B(a, b)$$

words after.

2 Operators

Basic operators and symbols.

Examples Quad: $A \quad B$.

Power: $e^{-b \times c}$.

Sqrt: $\sqrt{b \times c \times d}$.

Frac: $\frac{a}{b+c}$.

Others: $+, -, \times, \div, \pm, \mp$.

$\cup, \cap, \sqcup, \sqcap, \uplus$.

$\cdot, \star, *, \circ, \bullet, \diamond$.

$\oplus, \odot, \ominus, \oslash, \bigcirc, \otimes, \triangle, \nabla, \triangleleft, \triangleright$.

$\vee, \wedge, \amalg, \dagger, \ddagger, \wr$.

3 Set Operators

Set operators.

Examples Forall: $\forall a$.
 Exists: $\exists a$.
 In: $a \in A$.
 NotIn: $A \notin B$.
 Union: $\bigcup A$.
 Inter: $\bigcap A$.
 Minus: $A \setminus B$.
 Empty: \emptyset .

4 Differential and Integral Calculus

Calculus of Differential and integral.

Examples Sum: $\sum_{i=1}^{\infty}$.
 Prod: $\prod_{i=1}^{\infty}$.
 Integral: $\int_{x=0}^{\infty} f(x)dx$.
 Circular integral: $\oint_s f(s)ds$
 Partial: $\frac{\partial}{\partial x} f$.

5 Notions

Special notions.

Examples Underbrace: $\underbrace{A + B + C + \cdots + Z}_{26}$.
 Overbrace: $\overbrace{A + B + C + \cdots + Z}^{26}$.
 Leftarrow: $\xleftarrow[\textit{bottom}]{\textit{top}}$.
 Rightarrow: $\xrightarrow[\textit{bottom}]{\textit{top}}$.
 Tops: $\vec{a}, \hat{a}, \widehat{a}, \bar{a}, \tilde{a}, \acute{a}, \grave{a}, \check{a}, \sim a$
 Laplace: ∇a
 Dots: \dot{a}, \ddot{a}
 Tail: a'

6 Greek letters

Greek letters

Lowercase letters *alpha* – α , *beta* – β , *gamma* – γ , *delta* – δ , *epsilon* – ϵ
varepsilon – ε , *zeta* – ζ , *eta* – η , *theta* – θ , *varthetaeta* – ϑ
iota – ι , *kappa* – κ , *lambda* – λ , *mu* – μ , *nu* – ν
xi – ξ , *pi* – π , *varpi* – ϖ , *rho* – ρ , *varrho* – ϱ
sigma – σ , *varsigma* – ς , *tau* – τ , *upsilon* – υ , *phi* – ϕ
varphi – φ , *chi* – χ , *psi* – ψ , *omega* – ω

Uppercase letters *Gamma* – Γ , *Delta* – Δ , *Theta* – Θ , *Lambda* – Λ , *Xi* – Ξ , *Pi* – Π , *Sigma* – Σ , *Upsilon* – Υ , *Phi* – Φ , *Psi* – Ψ , *Omega* – Ω