Typst Syntax Equation Bank

70 equations across 5 categories — Calculus, Linear Algebra, Logic, Set Theory, Symbols & Operators

CALCULUS

Category	Expression
Definite integral	$\int_0^1 x^2 \, d x$
Integral with fraction	$\int_a^b \dfrac{1}{1 + x^2} \, d x$
Improper integral	$\int_0^\infty e^{-x} \, d x$
Double integral	$\iint_A f(x, y) \, d x \, d y$
Triple integral	$\iiint_V \rho(x, y, z) \, d V$
Contour integral	$\oint_C F \cdot d r$
Partial derivative	$\partial f \slash \partial x$
2nd partial derivative	$\partial^2 u \slash \partial x^2$
Limit	$\lim_{x \to 0} \dfrac{\sin x}{x} = 1$
Euler limit	$\lim_{n \to \infty} \left(1 + \dfrac{1}{n}\right)^n = e$
Derivative notation	$\dfrac{d}{dx}(x^3) = 3x^2$
Nabla divergence	$\nabla \cdot F = 0$
Nabla curl	$\nabla \times F = 0$
Summation	$\displaystyle\sum_{k=1}^n k = \dfrac{n(n+1)}{2}$
Product (factorial)	$\displaystyle\prod_{i=1}^n i = n!$

LINEAR ALGEBRA

Category	Expression
Vector (3D)	$\begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix}$
Symbolic vector	$\begin{pmatrix} a \\ b \\ c \end{pmatrix}$
Identity matrix	$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
2x2 matrix	$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$
Linear system	$A x = b$

Category	Expression
Transpose product	$A^T A$
Determinant	$\det = \lambda_1 \lambda_2$
Rank inequality	$\text{rank}(A) \le n$
Kernel subset	$\ker \subseteq V$
Image subset	$\text{im} \subseteq W$
Dot product	$x \cdot y = 0$
Cross product	$x \times y$
Norm (Euclidean)	$\|x\| = \sqrt{x_1^2 + x_2^2}$
Delimited matrix	$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
SVD decomposition	$A = U \Sigma V^T$

LOGIC

Category	Expression
Universal & existential	$\forall x \in \mathbb{R}, \exists y \in \mathbb{R}: y \ge x$
Law of excluded middle	$\forall p, p \lor \neg p$
Conjunction elimination	$p \land q \Rightarrow p$
Biconditional	$p \Leftrightarrow q$
Implication	$p \Rightarrow q$
De Morgan's law	$\neg (p \land q) \Leftrightarrow (\neg p) \lor (\neg q)$
Turnstile	$p \vdash q$
Semantic entailment	$\Gamma \vDash \varphi$
Tautology / contradiction	$\top \ne \bot$
Existential statement	$\exists x: P(x)$
Arrow notation	$\alpha \to \beta$
Transitivity	$A \le B \land B \le C \Rightarrow A \le C$

SET THEORY

Category	Expression
Element of	$x \in A$
Not element of	$x \notin A$
Proper subset	$A \subset B$

Subset or equal	$A \subseteq B$
Superset or equal	$A \supseteq B$
Union	$A \cup B$
Intersection	$A \cap B$
Set difference	$A \setminus B$
Empty set	$\emptyset \subseteq A$
Number sets inclusion	$\mathbb{R}^3 \subseteq \mathbb{C}^3$
Number set chain	$\mathbb{N} \subseteq \mathbb{Z} \subseteq \mathbb{Q} \subseteq \mathbb{R} \subseteq \mathbb{C}$
Function mapping	$f: A \to B$
Mapsto notation	$f: A \to B, x \mapsto f(x)$

SYMBOLS & OPERATORS

Category	Expression
Greek sum	$\alpha + \beta = \gamma$
Not equal	$\theta \neq \pi$
Greater or equal	$\lambda \geq 0$
Less or equal	$\mu \leq \nu$
Approximately equal	$\xi \approx \zeta$
Equivalence	$\varphi \equiv \psi$
Aleph / infinity	$\aleph_0 < \infty$
Reduced Planck const	$\hbar \omega$
Angle notation	$\angle ABC = 90°$
Parallel lines	$a \parallel b$
Perpendicular lines	$l \perp m$
Square root	$\sqrt{x^2 + y^2}$
Cube root	$\sqrt[3]{x}$
Fraction	$\dfrac{a + b}{c - d}$
Combined accents	$\hat{x} + \tilde{y} + \bar{z}$