

$a + b$ PLUS	$a - b$ MINUS	$a \times b$ MULTIPLY	$a \div b$ DIVIDE	$a = b$ EQUAL	$a \neq b$ NOT EQUAL
$\pm a$ PLUS OR MINUS	$a \approx b$ APPROXI- MATELY	$a < b$ LESS THAN	$a > b$ GREATER THAN	$a \leq b$ LESS OR EQUAL	$a \geq b$ GREATER OR EQUAL
$a \nless b$ NOT LESS THAN	$a \nmore b$ NOT MORE THAN	$a \nlessor b$ NOT LESS OR EQUAL	$a \nmoreor b$ NOT MORE OR EQUAL	$a \ll b$ MUCH LESS THAN	$a \gg b$ MUCH GREATER
$A \equiv B$ CONGRUENT	$A \sim B$ SIMILAR	a^2 SQUARE	a^n n TH POWER	\sqrt{a} SQUARE ROOT	$\sqrt[n]{a}$ n TH ROOT
$a \propto b$ PROPOR- TIONAL	$a\%$ PERCENT	$a : b$ RATIO	$a!$ FACTORIAL	$a!!$ DOUBLE FACTORIAL	${}^n a$ TETRATION
P_r^n PERMUTATION	C_r^n COMBINATION	$ a $ ABSOLUTE VALUE	$[a]$ FLOOR FUNCTION	$\lceil a \rceil$ CEILING FUNCTION	$\{a\}$ DECIMAL PART
$a \in A$ BELONGS TO	$A \ni a$ CONTAINS	$a \notin A$ DOES NOT BELONG TO	$A \subset B$ PROPER SUBSET OF	$A \subseteq B$ IMPROPER SUBSET OF	$A \supset B$ SUPERSET OF
\mathbb{N} NATURAL NUMBERS	\mathbb{Z} INTEGERS	\mathbb{Q} RATIONAL NUMBERS	\mathbb{R} REAL NUMBERS	\mathbb{A} ALGEBRAIC NUMBERS	\mathbb{C} COMPLEX NUMBERS
$n(A)$ CARDINALITY	ξ UNIVERSAL SET	\emptyset NULL SET	$A \setminus B$ SET DIFFERENCE	$A \cup B$ UNION	$A \cap B$ INTERSECT
A' COMPLEMENT SET	$:$ SUCH THAT	$\{a, b, c\}$ SET	\exists THERE EXIST	\nexists THERE DOES NOT EXIST	$\exists!$ ONLY ONE EXIST
$A \Rightarrow B$ IMPLIES	$A \Leftrightarrow B$ MUTUALLY IMPLY	$A \nRightarrow B$ DOES NOT IMPLY	$\neg A$ NOT	$a \vee b$ OR	$a \wedge b$ AND

$A \vdash B$ PROVES	$A \dashv B$ DOES NOT YIELD	\because BECAUSE	\therefore THEREFORE	\forall FOR ALL	\blacksquare END OF PROOF
a° DEGREE	a^c RADIAN	a^g GRADIAN	$\angle ABC$ ANGLE	$\sphericalangle ABC$ MEASURED ANGLE	$\sphericalangle ABC$ SPHERICAL ANGLE
$[ABC]$ AREA OF	$\right\lrcorner$ RIGHT ANGLE	$\triangle ABC$ TRIANGLE	$a^\circ b'c''$ ARCMINUTE ARCSECOND	$l_1 // l_2$ PARALLEL TO	$l_1 \perp l_2$ PERPENDI- CULAR TO
π PI (CONSTANT)	τ TAU (2π)	\widehat{AB} ARC	O ORIGIN	m_{AB} GRADIENT	(x, y) COORDINATES
\overline{AB} LINE SEGMENT	\longleftrightarrow AB LINE	\overrightarrow{AB} RAY	l_1 EQUATION OF LINE	$\odot C_1$ CIRCLE	Π_1 PLANE
φ GOLDEN RATIO	h VERTICAL HEIGHT	$ a $ VECTOR LENGTH	$\ a\ $ VECTOR LENGTH	\hat{u} UNIT VECTOR	$[ABC]$ AREA OF
\overrightarrow{AB} VECTOR	$u \cdot v$ DOT PRODUCT	$u \times v$ CROSS PRODUCT	$u \wedge v$ WEDGE PRODUCT	$\langle u, v \rangle$ INNER PRODUCT	$u \otimes v$ OUTER PRODUCT
e EULER'S NUMBER	$\log_a b$ LOGARITHM	$\lg a$ COMMON LOGARITHM	$\ln a$ NATURAL LOGARITHM	$\inf(A)$ INFIMUM	$\sup(A)$ SUPREMUM
$\sum_{n=a}^b$ SUMMATION	$\prod_{n=a}^b$ PRODUCT	$\lim_{x \rightarrow 0} x$ LIMIT	$\sinh \theta$ HYPERBOLIC SINE	$\cosh \theta$ HYPERBOLIC COSINE	$\tanh \theta$ HYPERBOLIC TANGENT
$f'(x)$ 1 ST DERIVATIVE (LAGRANGE)	$\frac{dy}{dx}$ 1 ST DERIVATIVE (LEIBNIZ)	\dot{x} 1 ST DERIVATIVE (NEWTON)	$f''(x)$ 2 ND DERIVATIVE (LAGRANGE)	$\frac{d^2y}{dx^2}$ 2 ND DERIVATIVE (LEIBNIZ)	\ddot{x} 2 ND DERIVATIVE (NEWTON)
Δx CHANGE IN	δx SMALL CHANGE IN	$\frac{\delta y}{\delta x}$ RATIO OF SMALL CHANGE	$\frac{\partial y}{\partial x}$ PARTIAL DERIVATIVE	$\int_a^b f dx$ INTEGRAL	$\iiint_V f dV$ TRIPLE INTEGRAL

∇f GRADIENT SCALAR FIELD	$\nabla \cdot F$ DIVERGENCE VECTOR FIELD	$\nabla \times F$ CURL OF VECTOR FIELD	$\nabla^2 f$ LAPLACIAN (DIV GRAD)	$\oint f dz$ CONTOUR INTEGRAL	$\iiint f dV$ CLOSED VOLUME INTEGRAL
$\text{sgn}(x)$ SIGN FUNCTION	$B(x,y)$ BETA FUNCTION	$\Gamma(n)$ GAMMA FUNCTION	$\zeta(s)$ RIEMANN ZETA	ϵ, δ A VERY SMALL NUMBER	γ EULER- MASCHERONI
$P(A)$ PROBABILITY	$P(A B)$ GIVEN	$E(X)$ EXPECTED VALUE	Q_1 LOWER QUARTILE	Q_3 UPPER QUARTILE	f FREQUENCY
N POPULATION SIZE	n SAMPLE SIZE	μ POPULATION MEAN	\bar{x} SAMPLE MEAN	σ_x POPULATION STD DEV	s_x SAMPLE STD DEV
p PROBABILITY OF SUCCESS	q PROBABILITY OF FAILURE	$\max(A)$ MAXIMUM	$\min(A)$ MINIMUM	$\text{Var}(X)$ VARIANCE	\tilde{x} MEDIAN
$U(a,b)$ UNIFORM DISTRIBUTION	$\text{Bin}(n,p)$ BINOMIAL DISTRIBUTION	$\text{Geo}(p)$ GEOMETRIC DISTRIBUTION	$N(\mu, \sigma^2)$ NORMAL DISTRIBUTION	$\Gamma(\alpha, \beta)$ GAMMA DISTRIBUTION	$\exp(\lambda)$ EXPONENTIAL DISTRIBUTION
$\chi^2(x)$ CHI-SQUARE DISTRIBUTION	$\text{corr}(x,y)$ CORRELATION	r SAMPLE CORRELATION	Ω SAMPLE SPACE	H_0 NULL HYPOTHESIS	H_1 ALTERNATIVE HYPOTHESIS
α FALSE +VE RATE	β FALSE -VE RATE	β_1 REGRESSION COEFFICIENT	α INTERCEPT COEFFICIENT	R^2 COEFFICIENT OF DETERMINATION	ν DEGREE OF FREEDOM
z Z-SCORE	π POPULATION PROPORTION	\hat{p} SAMPLE PROPORTION	t T-VALUE	PMF PROBABILITY MASS	PDF PROBABILITY DENSITY
i IMAGINARY UNIT	z IMAGINARY NUMBER	\bar{z} COMPLEX CONJUGATE	z^* COMPLEX CONJUGATE	$\text{Re}(z)$ REAL PART	$\text{Im}(z)$ IMAGINARY PART
\mathbb{H} QUATERNIONS	\mathbb{O} OCTONIONS	\mathbb{S} SEDENIONS	$\Re(z)$ REAL PART	$\Im(z)$ IMAGINARY PART	$\text{Arg}(z)$ ARGUMENT

\overline{ABCD} CONCATENATE	∞ INFINITY	\aleph_0 ALEPH-NULL	$w.r.t.$ WITH RESPECT TO	IFF IF AND ONLY IF	$f \circ g$ COMPOSITE FUNCTION
$a \mapsto b$ MAPS TO	$A \simeq B$ ISOMORPHIC GRAPH	$S(n)$ SUCCESSOR FUNCTION	$Pred(n)$ PREDECESSOR FUNCTION	$A(a,b)$ ACKERMANN FUNCTION	\mathbb{R}^2 EUCLIDEAN PLANE
K_n COMPLETE GRAPH	$K_{n,m}$ COMPLETE BIPARTITE	C_n CYCLE	P_n PATH	$a \uparrow b$ KNUTH'S UP-ARROW	g_{64} GRAHAM'S NUMBER
$\sin \theta$ SINE	$\cos \theta$ COSINE	$\tan \theta$ TANGENT	$\sec \theta$ SECANT	$\csc \theta$ COSECANT	$\cot \theta$ COTANGENT
$\sin^{-1} \theta$ ARCSINE	$\cos^{-1} \theta$ ARCCOSINE	$\tan^{-1} \theta$ ARC-TANGENT	$\sec^{-1} \theta$ ARCSECANT	$\csc^{-1} \theta$ ARC-COSECANT	$\cot^{-1} \theta$ ARC-COTANGENT
χ EULER CHARACTERISTIC	V # OF VERTICES	E # OF EDGES	F # OF FACES	$a b$ DIVIDES	$a \nmid b$ DOES NOT DIVIDE
$\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ MATRIX	I IDENTITY MATRIX	$\det(M)$ DETERMINANT	$\begin{vmatrix} a & b \\ c & d \end{vmatrix}$ DETERMINANT	$\text{adj}(M)$ ADJUGATE MATRIC	M^{-1} INVERSE MATRIX
$A \otimes B$ KRONECKER PRODUCT	M^T TRANSPOSE	$\text{rank}(M)$ KERNEL	$\text{dim}(V)$ DIMENSION	$\text{ker}(M)$ KERNEL	$\text{span}(M)$ SPAN
δ_{ijk} KRONECKER DELTA	$x \bmod y$ MODULO	$\pi(x)$ PRIME COUNTING	$\varphi(n)$ EULER'S TORTIENT	$a < b$ PRECEDES	$a > b$ SUCCEEDS