

FÓRMULA – REFERÈNCIA D'ORDRES

Totes les ordres procedeixen del document en anglès **LibreOffice Math Guide**.

Unary / binary operators

<i>Operation</i>	<i>Command</i>	<i>Display</i>
+sign	+1	+1
–sign	–1	–1
+/– sign	+–1	± 1
–/+ sign	–+1	∓ 1
Boolean not	neg a	$\neg a$
Addition +	a + b	$a + b$
Dot product	a cdot b	$a \cdot b$
Multiplication (X)	a times b	$a \times b$
Multiplication (asterisk)	a * b	$a * b$
Boolean ‘and’	a and b	$a \wedge b$
Subtraction (–)	a – b	$a - b$
Division (as a fraction)	a over b	$\frac{a}{b}$
Division (as an operator)	a div b	$a \div b$
Division (with a slash)	a / b	a / b
Boolean ‘or’	a or b	$a \vee b$
Concatenation	a circ b	$a \circ b$

Relational operators

Operation	Command	Display
Is equal	a = b	$a = b$
Is not equal	a <> b	$a \neq b$
Approximately	a approx b	$a \approx b$
Divides	a divides b	$a b$
Does not divide	a ndivides b	$a \nmid b$
Less than	a < b	$a < b$
Greater than	a > b	$a > b$
Similar to or equal	a simeq b	$a \simeq b$
Parallel	a parallel b	$a \parallel b$
Orthogonal to	a ortho b	$a \perp b$
Less than or equal to	a leslant b	$a \leq b$
Greater than or equal to	a geslant b	$a \geq b$
Similar to	a sim b	$a \sim b$
Congruent	a equiv b	$a \equiv b$
Less than or equal to	a <= b	$a \leq b$
Greater than or equal to	a >= b	$a \geq b$
Proportional	a prop b	$a \propto b$
Toward	a toward b	$a \rightarrow b$
Arrow left	a dlarrow b	$a \leftarrow b$
Double arrow left and right	a dlrarrow b	$a \leftrightarrow b$
Arrow right	a drarrow b	$a \Rightarrow b$

Set operations

Operation	Command	Display
Is in	a in B	$a \in B$
Is not in	a notin B	$a \notin B$
Owns	A owns b	$A \ni b$
Empty set	emptyset	\emptyset
Intersection	A intersection B	$A \cap B$
Union	A union B	$A \cup B$
Difference	A setminus B	$A \setminus B$
Quotient	A slash B	A / B
Aleph	aleph	\aleph
Subset	A subset B	$A \subset B$
Subset or equal to	A subseteq B	$A \subseteq B$
Superset	A supset B	$A \supset B$
Superset or equal to	A supseteq B	$A \supseteq B$
Not subset	A nsubset B	$A \not\subset B$
Not subset or equal	A nsubseteq B	$A \not\subseteq B$
Not superset	A nsupset B	$A \not\supset B$
Not superset or equal	A nsupseteq B	$A \not\supseteq B$
Set of natural numbers	setN	\mathbb{N}
Set of integers	setZ	\mathbb{Z}
Set of rational numbers	setQ	\mathbb{Q}
Set of real numbers	setR	\mathbb{R}
Set of complex numbers	setC	\mathbb{C}

Functions

Operation	Command	Display
Exponential	func e^{a}	e^a
Natural logarithm	ln(a)	$\ln(a)$
Exponential function	exp(a)	$\exp(a)$
Logarithm	log(a)	$\log(a)$
Power	a^{b}	a^b
Sine	sin(a)	$\sin(a)$
Cosine	cos(a)	$\cos(a)$
Tangent	tan(a)	$\tan(a)$
Cotangent	cot(a)	$\cot(a)$
Square root	sqrt{a}	\sqrt{a}
Arcsine	arcsin(a)	$\arcsin(a)$
Arc cosine	arccos(a)	$\arccos(a)$
Arctangent	arctan(a)	$\arctan(a)$
Arc cotangent	arccot(a)	$\operatorname{arccot}(a)$
n th root	nroot{a}{b}	$\sqrt[b]{a}$
Hyperbolic sine	sinh(a)	$\sinh(a)$
Hyperbolic cosine	cosh(a)	$\cosh(a)$
Hyperbolic tangent	tanh(a)	$\tanh(a)$
Hyperbolic cotangent	coth(a)	$\operatorname{coth}(a)$
Absolute value	abs{a}	$ a $
Arc hyperbolic sine	arsinh(a)	$\operatorname{arsinh}(a)$
Arc hyperbolic cosine	arcosh(a)	$\operatorname{arcosh}(a)$
Arc hyperbolic tangent	artanh(a)	$\operatorname{artanh}(a)$
Arc hyperbolic cotangent	arcoth(a)	$\operatorname{arcoth}(a)$
Factorial	fact{a}	$a!$

Operators

All operators can be used with the limit functions (“from” and “to”).

Operation	Command	Display
Limit	<code>lim{a}</code>	$\lim a$
Sum	<code>sum{a}</code>	$\sum a$
Product	<code>prod{a}</code>	$\prod a$
Coproduct	<code>coprod{a}</code>	$\coprod a$
Upper and lower bounds shown with integral	<code>int from {r_0} to {r_t} a</code>	$\int_{r_0}^{r_t} a$
Integral	<code>int{a}</code>	$\int a$
Double integral	<code>iint{a}</code>	$\iint a$
Triple integral	<code>iiint{a}</code>	$\iiint a$
Lower bound shown with summation symbol	<code>sum from{3}b</code>	$\sum_3 b$
Contour integral	<code>lint a</code>	$\oint a$
Double curved integral	<code>llint a</code>	$\oiint a$
Triple curved integral	<code>lllnt a</code>	$\oiiint a$
Upper bound shown with product symbol	<code>prod to{3} r</code>	$\prod^3 r$

Attributes

<i>Operation</i>	<i>Command</i>	<i>Display</i>
Acute accent	acute a	á
Grave accent	grave a	à
Reverse circumflex	check a	ă
Breve	breve a	ă
Circle	circle a	â
Vector arrow	vec a	\vec{a}
Tilde	tilde a	ã
Circumflex	hat a	â
Line above	bar a	\bar{a}
Dot	dot a	â
Wide vector arrow	widevec abc	\overrightarrow{abc}
Wide tilde	widetilde abc	\widetilde{abc}
Wide circumflex	widehat abc	\widehat{abc}
Double dot	ddot a	â
Line over	overline abc	\overline{abc}
Line under	underline abc	\underline{abc}
Line through	overstrike abc	\cancel{abc}
Triple dot	dddot a	â
Transparent (useful to get a placeholder of a given size)	phantom a	
Bold font	bold a	a
Italic font	ital "a"	<i>a</i>
Resize font	size 16 qv	qv
Following item in sans serif font	font sans qv	qv
Following item in serif font	font serif qv	qv
Following item in fixed font	font fixed qv	qv
Make color of following text cyan	color cyan qv	qv
Make color of following text yellow	color yellow qv	qv
Make color of following text white	color white qv	qv

Operation	Command	Display
Make color of following text green	color green qv	qv
Make color of following text blue	color blue qv	qv
Make color of following text red	color red qv	qv
Make color green returns to default color black	color green X qv	Xqv
Brace items to change color of more than one item	color green {X qv}	Xqv

Miscellaneous

Operation	Command	Display
Infinity	infinity	∞
Partial	partial	∂
Nabla	nabla	∇
There exists	exists	\exists
For all	forall	\forall
H bar	hbar	\hbar
Lambda bar	lambdabar	λ
Real part	re	\Re
Imaginary part	im	\Im
Weierstrass p	wp	\wp
Left arrow	leftarrow	\leftarrow
Right arrow	rightarrow	\rightarrow
Up arrow	uparrow	\uparrow
Down arrow	downarrow	\downarrow
Dots at bottom	dotslow	\dots
Dots at middle	dotsaxis	\dots
Dots vertical	dotsvert	\vdots
Dots diagonal upward	dotsup	\dotscolor{red}
Dots diagonal downward	dottdown	\dotscolor{red}

Brackets

Operation	Command	Display
Round Brackets	(a)	(a)
Square Brackets	[b]	[b]
Double Square Brackets	\lbracket c \rbracket	\[c]
Single line	\lvert a \rvert	a
Double line	\lvert\lvert a \rvert\rvert	a
Braces	\lbrace w \rbrace	{w}
Angle Brackets	\langle d \rangle	<d>
Operator Brackets	\langle a \mid b \rangle	<a b>
Group brackets (used for program control)	{a}	a
Scalable round brackets (add the word "left" before a left bracket and "right" before a right bracket)	\left (\stack{a \# b \# z} \right)	$\left(\begin{matrix} a \\ b \\ z \end{matrix} \right)$
Square brackets scalable (as above)	\left [\stack{x \# y} \right]	$\left[\begin{matrix} x \\ y \end{matrix} \right]$
Double square brackets scalable	\left \lbracket c \right \rbracket	\[c]
Line scalable	\left \lvert a \right \rvert	a
Double line scalable	\left \lvert\lvert d \right \rvert\rvert	d
Brace scalable	\left \lbrace e \right \rbrace	{e}
Angle bracket scalable	\left \langle f \right \rangle	<f>
Operator brackets scalable	\left \langle g \mid h \right \rangle	<g h>
Over brace scalable	{The brace is above} \overbrace{a}	$\overbrace{\text{The brace is above}}^a$
Under brace scalable	{the brace is below} \underbrace{f}	$\underbrace{\text{the brace is below}}_f$

Formats

Operation	Command	Display
Left superscript	<code>a lsup{b}</code>	${}^b a$
Center superscript	<code>a csup{b}</code>	a^b
Right superscript	<code>a^{b}</code>	a^b
Left subscript	<code>a lsub{b}</code>	${}_b a$
Center subscript	<code>a csub{b}</code>	a_b
Right subscript	<code>a_{b}</code>	a_b
Align character to left (text is aligned center by default)	<code>stack { Hello world # alignl (a) }</code>	$\begin{matrix} \text{Hello world} \\ (a) \end{matrix}$
Align character to center	<code>stack{Hello world # alignc(a)}</code>	$\begin{matrix} \text{Hello world} \\ (a) \end{matrix}$
Align character to right	<code>stack { Hello world # alignr(a)}</code>	$\begin{matrix} \text{Hello world} \\ (a) \end{matrix}$
Vertical stack of 2	<code>binom{a}{b}</code>	$\begin{matrix} a \\ b \end{matrix}$
Vertical stack, more than 2	<code>stack{a # b # z}</code>	$\begin{matrix} a \\ b \\ z \end{matrix}$
Matrix	<code>matrix{ a # b ## c # d }</code>	$\begin{matrix} a & b \\ c & d \end{matrix}$
Equations aligned at '=' (using 'matrix')	<code>matrix{ a # "=" # alignl{b} ## } # "=" # alignl{c+1} }</code>	$\begin{matrix} a & = & b \\ & & = c + 1 \end{matrix}$
Equations aligned at '=' (using 'phantom')	<code>stack{ alignl{a} = b # alignl{phantom{a} = c+1} }</code>	$\begin{matrix} a & = & b \\ & & = c + 1 \end{matrix}$
New line	<code>asldkfjo newline sadkfj</code>	$\begin{matrix} asldkfjo \\ sadkfj \end{matrix}$
No gap	<code>nospace { x + y }</code>	$x + y$
Normal	<code>x+y</code>	$x + y$
Small gap (grave)	<code>stuff `stuff</code>	$stuff \text{ ` } stuff$
Large gap (tilde)	<code>stuff~stuff</code>	$stuff \text{ ~ } stuff$

Characters – Greek

%ALPHA	A	%BETA	B	%GAMMA	Γ	%DELTA	Δ	%EPSILON	E
%ZETA	Z	%ETA	H	%THETA	Θ	%IOTA	I	%KAPPA	K
%LAMBDA	Λ	%MU	M	%NU	N	%XI	Ξ	%OMICRON	O
%PI	Π	%RHO	P	%SIGMA	Σ	%TAU	T	%UPSILON	Y
%PHI	Φ	%CHI	X	%PSI	Ψ	%OMEGA	Ω		
%alpha	α	%beta	β	%gamma	γ	%delta	δ	%epsilon	ϵ
%varepsilon	ε	%zeta	ζ	%eta	η	%theta	θ	%vartheta	ϑ
%iota	ι	%kappa	κ	%lambda	λ	%mu	μ	%nu	ν
%xi	ξ	%omicron	o	%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

Characters – Special

%and \wedge	%angle \sphericalangle	%element \in	%identical \equiv
%infinite ∞	%noelement \notin	%notequal \neq	%or \vee
%perthousand ‰	%strictlygreaterthan \gg	%strictlylessthan \ll	%tendto \rightarrow