Symbols defined in *khermisc*

General symbols

Symbol	Name	Definition
$a := b$	left hand side definition: a is defined by b	`a \ldef b`
$a =: b$	right hand side definition: b is defined by a	`a \rdef b`

Symbols in option *sets*

Symbol	Name	Definition
$\mathbb{N}$	natural numbers	`\N`
$\mathbb{Z}$	integers	`\Z`
$\mathbb{Q}$	rational numbers	`\Q`
$\mathbb{R}$	real numbers	`\R`
$\overline{\mathbb{R}}$	extended real numbers	`\Rbar`
$\mathbb{C}$	complex numbers	`\C`
$\mathcal{P}(E)$	power set of E	`\PowerSet(E)`

Symbols in option *real*

Symbol	Name	Definition
e	Euler's number	`\e`
argmin	arg min	`\argmin`
argmax	arg max	`\argmax`
$\lvert x\rvert$	absolute value of x	`\abs{x}`
d	straight differential for integrals and derivatives	`\d`
$\lVert x\rVert$	norm of x	`\norm{x}`
$\lVert x\rVert_{L^2}$	norm of x with subscript	`\norm[L^2]{x}`
vol	volume operator	`\vol`
$\mathrm{vol}\,(A)$	volume of A	`\vol[A]`
$\mathbb{1}_A$	indicator function of set A	`\ind{A}`
$\mathbb{1}_A\,(x)$	indicator function of A evaluated at $x \in \mathbb{R}$	`\ind[x]{A}`
$\lfloor x \rfloor$	largest integer smaller than x	`\floor{x}`
$\lceil x \rceil$	smallest integer larger than x	`\ceil{x}`
sinc	sinc function $\mathrm{sinc}(x) = \sin(x)/x$	`\sinc`
o	small o	`\landau`
$\mathcal{O}$	big O	`\Landau`

Symbols in option *complex*

Symbol	Name	Definition
i	imaginary unit	`\iu`

Re	real part of imaginary number	`\re`
$\operatorname{Re}(z)$	real part of imaginary number z	`\re[z]`
Im	imaginary part of imaginary number	`\im`
$\operatorname{Im}(z)$	imaginary part of imaginary number z	`\im[z]`

Symbols in option *measure*

Symbol	**Name**	**Definition**
$\mathscr{D}$	Dynkin system	`\Dynkin`
τ	topology	`\Topology`
$\mathscr{B}(\mathbb{R})$	Borel sigma algebra	`\Borel(\R)`
λ	Lebesgue measure	`\leb`
$f_\sharp\mu$	push forward measure of μ under f	`\pfm{\mu}{f}`
d	metric symbol	`\metric`
d_X	metric on X	`\metric[][][X]`
$\mathrm{d}_X(x, y)$	metric on X of x and y	`\metric[x][y][X]`
$\mathrm{d}(x, y)$	metric of x and y	`\metric[x][y]`

Symbols in option *prob*

Symbol	**Name**	**Definition**
$X \perp\!\!\!\perp Y$	X is independent of Y	`X \indep Y`
Ω	Probability space	`\PSpace`
$\mathscr{F}$	Sigma algebra based on letter F	`\SigAlgF`
$X_n \xrightarrow{d} X$	X_n converges to X in distribution	`X_n \indist X`
$X_n \xrightarrow{a.s.} X$	X_n converges to X almost surely	`X_n \as X`
$X_n \xrightarrow{p.s.} X$	X_n converges to X presque sûrement	`X_n \ps X`
$X_n \xrightarrow{L^p} X$	X_n converges to X in L^p	`X_n \inLp{p} X`
$X_n \xrightarrow{\mathbb{P}} X$	X_n converges to X in probability	`X_n \inprob X`
$X \overset{d}{=} Y$	X is equal to Y in distribution	`X \eqindist Y`
$X \overset{a.s.}{=} Y$	X is equal to Y almost surely	`X \eqas Y`
$X \overset{a.s.}{\neq} Y$	X is not equal to Y almost surely	`X \neqas Y`
$X \overset{p.s.}{=} Y$	X is equal to Y presque sûrement	`X \eqps Y`
$X \overset{p.s.}{\neq} Y$	X is not equal to Y presque sûrement	`X \neqps Y`
$o_{a.s.}$	little o almost surely	`\landauAS`
$\mathcal{O}_{a.s.}$	big O almost surely	`\LandauAS`
$o_{\mathbb{P}}$	little o in probability	`\landauP`
$\mathcal{O}_{\mathbb{P}}$	big O in probability	`\LandauP`
cov	covariance operator	`\cov`
$\operatorname{cov}[X, X]$	covariance of X	`\cov[X]`
$\operatorname{cov}[X, Y]$	covariance of X and Y	`\cov[X][Y]`
corr	correlation operator	`\corr`

$\operatorname{corr}[X, X]$	correlation of X	`\corr[X]`
$\operatorname{corr}[X, Y]$	correlation of X and Y	`\corr[X][Y]`
var	variance operator	`\var`
$\operatorname{var}[X]$	variance of X	`\var[X]`
sd	standard deviation operator	`\sd`
$\operatorname{sd}[X]$	standard deviation of X	`\sd[X]`
$\mathbb{P}$	probability measure	`\Prob`
$\mathbb{P}(A)$	probability measure of event A	`\Prob[A]`
$\mathbb{P}_X$	probability measure of X	`\Prob[][X]`
$\mathbb{P}_X(A)$	probability measure of X for event A	`\Prob[A][X]`
$\mathbb{E}$	expectation operator	`\Exp`
$\mathbb{E}[X]$	expectation of X	`\Exp[X]`
$\mathbb{E}_F$	expectation with respect to F	`\Exp[][F]`
$\mathbb{E}_F[X]$	expectation of X with respect to F	`\Exp[X][F]`
med	median operator	`\median`
$\operatorname{med}[X]$	median of X	`\median[X]`

Symbols in option *bold*

Bold symbols for the Latin and Greek alphabet. Bold symbols basically follow the pattern `\b+LETTER`. However, for some symbols this pattern leads to already reserved keywords. For bold f, m and η we therefore have `\bbf`, `\bbm` and `\bfeta`.

Symbol	Name	Definition
$\boldsymbol{A}$	bold A	`\bA`
$\boldsymbol{B}$	bold B	`\bB`
$\boldsymbol{C}$	bold C	`\bC`
$\boldsymbol{D}$	bold D	`\bD`
$\boldsymbol{E}$	bold E	`\bE`
$\boldsymbol{F}$	bold F	`\bF`
$\boldsymbol{G}$	bold G	`\bG`
$\boldsymbol{H}$	bold H	`\bH`
$\boldsymbol{I}$	bold I	`\bI`
$\boldsymbol{J}$	bold J	`\bJ`
$\boldsymbol{K}$	bold K	`\bK`
$\boldsymbol{L}$	bold L	`\bL`
$\boldsymbol{M}$	bold M	`\bM`
$\boldsymbol{N}$	bold N	`\bN`
$\boldsymbol{O}$	bold O	`\bO`
$\boldsymbol{P}$	bold P	`\bP`
$\boldsymbol{Q}$	bold Q	`\bQ`
$\boldsymbol{R}$	bold R	`\bR`
$\boldsymbol{S}$	bold S	`\bS`
$\boldsymbol{T}$	bold T	`\bT`
$\boldsymbol{U}$	bold U	`\bU`

$\boldsymbol{V}$	bold V	`\bV`
$\boldsymbol{W}$	bold W	`\bW`
$\boldsymbol{X}$	bold X	`\bX`
$\boldsymbol{Y}$	bold Y	`\bY`
$\boldsymbol{Z}$	bold Z	`\bZ`
$\boldsymbol{a}$	bold a	`\ba`
$\boldsymbol{b}$	bold b	`\bb`
$\boldsymbol{c}$	bold c	`\bc`
$\boldsymbol{d}$	bold d	`\bd`
$\boldsymbol{e}$	bold e	`\be`
$\boldsymbol{f}$	bold f	`\bbf`
$\boldsymbol{g}$	bold g	`\bg`
$\boldsymbol{h}$	bold h	`\bh`
$\boldsymbol{i}$	bold i	`\bi`
$\boldsymbol{j}$	bold j	`\bj`
$\boldsymbol{k}$	bold k	`\bk`
$\boldsymbol{l}$	bold l	`\bl`
$\boldsymbol{m}$	bold m	`\bbm`
$\boldsymbol{n}$	bold n	`\bn`
$\boldsymbol{o}$	bold o	`\bo`
$\boldsymbol{p}$	bold p	`\bp`
$\boldsymbol{q}$	bold q	`\bq`
$\boldsymbol{r}$	bold r	`\br`
$\boldsymbol{s}$	bold s	`\bs`
$\boldsymbol{t}$	bold t	`\bt`
$\boldsymbol{u}$	bold u	`\bu`
$\boldsymbol{v}$	bold v	`\bv`
$\boldsymbol{w}$	bold w	`\bw`
$\boldsymbol{x}$	bold x	`\bx`
$\boldsymbol{y}$	bold y	`\by`
$\boldsymbol{z}$	bold z	`\bz`
$\boldsymbol{\alpha}$	bold alpha	`\balpha`
$\boldsymbol{\beta}$	bold beta	`\bbeta`
$\boldsymbol{\gamma}$	bold gamma	`\bgamma`
$\boldsymbol{\Gamma}$	bold Gamma	`\bGamma`
$\boldsymbol{\delta}$	bold delta	`\bdelta`
$\boldsymbol{\Delta}$	bold Delta	`\bDelta`
$\boldsymbol{\epsilon}$	bold epsilon	`\bepsilon`
$\boldsymbol{\varepsilon}$	bold varepsilon	`\bvarepsilon`
$\boldsymbol{\zeta}$	bold zeta	`\bzeta`
$\boldsymbol{\eta}$	bold eta	`\bfeta`
$\boldsymbol{\theta}$	bold theta	`\btheta`
$\boldsymbol{\vartheta}$	bold vartheta	`\bvartheta`
$\boldsymbol{\Theta}$	bold Theta	`\bTheta`
$\boldsymbol{\iota}$	bold iota	`\biota`
$\boldsymbol{\kappa}$	bold kappa	`\bkappa`

$\boldsymbol{\lambda}$	bold lambda	`\blambda`
$\boldsymbol{\Lambda}$	bold Lambda	`\bLambda`
$\boldsymbol{\mu}$	bold mu	`\bmu`
$\boldsymbol{\nu}$	bold nu	`\bnu`
$\boldsymbol{\xi}$	bold xi	`\bxi`
$\boldsymbol{\Xi}$	bold Xi	`\bXi`
$\boldsymbol{\pi}$	bold pi	`\bpi`
$\boldsymbol{\Pi}$	bold pi	`\bPi`
$\boldsymbol{\rho}$	bold rho	`\brho`
$\boldsymbol{\varrho}$	bold varrho	`\bvarrho`
$\boldsymbol{\sigma}$	bold sigma	`\bsigma`
$\boldsymbol{\Sigma}$	bold Sigma	`\bSigma`
$\boldsymbol{\tau}$	bold tau	`\btau`
$\boldsymbol{\upsilon}$	bold upsilon	`\bupsilon`
$\boldsymbol{\Upsilon}$	bold Upsilon	`\bUpsilon`
$\boldsymbol{\phi}$	bold phi	`\bphi`
$\boldsymbol{\varphi}$	bold varphi	`\bvarphi`
$\boldsymbol{\Phi}$	bold Phi	`\bPhi`
$\boldsymbol{\chi}$	bold chi	`\bchi`
$\boldsymbol{\psi}$	bold psi	`\bpsi`
$\boldsymbol{\Psi}$	bold Psi	`\bPsi`
$\boldsymbol{\omega}$	bold omega	`\bomega`
$\boldsymbol{\Omega}$	bold Omega	`\bOmega`

Symbols in option *cal*

Calligraphic letter for the Latin alphabet. Calligraphic symbols follow the pattern `\cal+LETTER`.

Symbol	**Name**	**Definition**
$\mathcal{A}$	calligraphy A	`\calA`
$\mathcal{B}$	calligraphy B	`\calB`
$\mathcal{C}$	calligraphy C	`\calC`
$\mathcal{D}$	calligraphy D	`\calD`
$\mathcal{E}$	calligraphy E	`\calE`
$\mathcal{F}$	calligraphy F	`\calF`
$\mathcal{G}$	calligraphy G	`\calG`
$\mathcal{H}$	calligraphy H	`\calH`
$\mathcal{I}$	calligraphy I	`\calI`
$\mathcal{J}$	calligraphy J	`\calJ`
$\mathcal{K}$	calligraphy K	`\calK`
$\mathcal{L}$	calligraphy L	`\calL`
$\mathcal{M}$	calligraphy M	`\calM`
$\mathcal{N}$	calligraphy N	`\calN`
$\mathcal{O}$	calligraphy O	`\calO`
$\mathcal{P}$	calligraphy P	`\calP`

$\mathcal{Q}$	calligraphy Q	`\calQ`
$\mathcal{R}$	calligraphy R	`\calR`
$\mathcal{S}$	calligraphy S	`\calS`
$\mathcal{T}$	calligraphy T	`\calT`
$\mathcal{U}$	calligraphy U	`\calU`
$\mathcal{V}$	calligraphy V	`\calV`
$\mathcal{W}$	calligraphy W	`\calW`
$\mathcal{X}$	calligraphy X	`\calX`
$\mathcal{Y}$	calligraphy Y	`\calY`
$\mathcal{Z}$	calligraphy Z	`\calZ`
$\mathcal{a}$	calligraphy a	`\cala`
$\mathcal{b}$	calligraphy b	`\calb`
$\mathcal{c}$	calligraphy c	`\calc`
$\mathcal{d}$	calligraphy d	`\cald`
$\mathcal{e}$	calligraphy e	`\cale`
$\mathcal{f}$	calligraphy f	`\calf`
$\mathcal{g}$	calligraphy g	`\calg`
$\mathcal{h}$	calligraphy h	`\calh`
$\mathcal{i}$	calligraphy i	`\cali`
$\mathcal{j}$	calligraphy j	`\calj`
$\mathcal{k}$	calligraphy k	`\calk`
$\mathcal{l}$	calligraphy l	`\call`
$\mathcal{m}$	calligraphy m	`\calm`
$\mathcal{n}$	calligraphy n	`\caln`
$\mathcal{o}$	calligraphy o	`\calo`
$\mathcal{p}$	calligraphy p	`\calp`
$\mathcal{q}$	calligraphy q	`\calq`
$\mathcal{r}$	calligraphy r	`\calr`
$\mathcal{s}$	calligraphy s	`\cals`
$\mathcal{t}$	calligraphy t	`\calt`
$\mathcal{u}$	calligraphy u	`\calu`
$\mathcal{v}$	calligraphy v	`\calv`
$\mathcal{w}$	calligraphy w	`\calw`
$\mathcal{x}$	calligraphy x	`\calx`
$\mathcal{y}$	calligraphy y	`\caly`
$\mathcal{z}$	calligraphy z	`\calz`

Symbols in option *laws*

Symbols for probability laws follow a R type syntax `\l+NAME`.

Symbol	Name	Definition
Unif	law of the uniform distribution	`\lunif`
$\mathcal{N}$	law of the normal distribution	`\lnorm`
Pois	law of the Poisson distribution	`\lpois`
Binom	law of the binomial distribution	`\lbin`

Exp	law of the exponential distribution	`\lexp`
Ber	law of the Bernoulli distribution	`\lber`
t	law of the student t distribution	`\lt`