

Kp-fonts: OpenType version

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This bundle provides OpenType versions of Type1 Kp-fonts designed by Christophe Caignaert. See `Kpfonts-Doc-English.pdf` for the full documentation of the original Type1 fonts.

It is usable only with LuaTeX or XeTeX engines; it consists of sixteen Text OpenType fonts, a Roman family **KpRoman** in eight shapes and weights—*Regular, Italic, Bold, BoldItalic, Light, LightItalic, Semibold, SemiboldItalic*—, a Sans-Serif family **KpSans** and a TypeWriter family **KpMono**, each of them in four shapes and weights—*Regular, Italic, Bold* and *BoldItalic*— and five Math OpenType fonts **KpMath-Regular**, **KpMath-Bold**, **KpMath-Light**, **KpMath-Semibold** and **KpMath-Sans**.

KpRoman and **KpSans** families have small caps available in two sizes (SmallCaps and PetiteCaps), upper and lowercase digits (0123456789), ancient ligatures *ct*, *st* and *Q* a long-tailed capital *Q*. Superior and inferior digits and letters have been added to the OpenType **KpRoman** and **KpSans** fonts for footnotes' calls and abbreviations 1st, 2nd...

Latin and Greek letters are available in Upright and Italic shapes, in Bold and Regular weights, for all Math fonts: $\alpha \beta \Gamma \Delta$, $\alpha \beta \Gamma \Delta$, $\alpha \beta \Gamma \Delta$, $\alpha \beta \Gamma \Delta$.

Blackboard Bold capitals are available in two shapes, Serif and Sans: `\mathbb{ABC}` prints either \mathbb{ABC} (default) or \mathbb{ABC} (option `[Style=bbsans]`) Commands `\mathcal{ABC}` and `\mathscr{ABC}` print respectively \mathcal{ABC} and \mathscr{ABC} .

File `unimath-kpfonts.pdf` shows the full list of Unicode Math symbols provided by Kp-fonts, compared with other common Math fonts. More symbols, specific to Kp-fonts, are listed in section 3.2.

A style file `kpfont-otf.sty` is provided to load Kp-fonts easily. It is derived from `kpfont.sty` but options differ.

Please beware of the *experimental* status of the current version (0.40).

All fonts are covered by OFL licence, style file and documentation are under LPPL-1.3 licence.

1 Loading kpfonts-otf.sty

For users of the original kpfonts.sty package, the easiest way to try the OpenType version is to load kpfonts-otf.sty:

```
\usepackage[ options ]{kpfonts-otf}
```

this loads unicode-math (and fontspec) and defines KpRoman (Regular or Light depending on options), KpSans and KpMono as Text fonts, KpMath (Regular or Light depending on options) as Math fonts.

kpfonts-otf.sty also defines all symbols available in latexsym and amssymb under the same names¹ and a bunch of Kp-fonts specifics symbols.

1.1 Global options for both Text and Maths

light: switches to *light* fonts, metrics are unchanged; *light* fonts might not look perfect on screen but they print fine.

Please compare *regular* (left) and *light* fonts (right):

Normal or light? Just a matter of taste. Normal or light? Just a matter of taste.
E = mc² *E = mc²*

Normal or light? Just a matter of taste *Normal or light? Just a matter of taste*

Normal or light? Just a matter of taste **Normal or light? Just a matter of taste**

Normal or light? Just a matter of taste *Normal or light? Just a matter of taste*

nomath: load neither unicode-math nor KpMath fonts; useful for documents without Maths, or to choose other Math fonts.

notext: do not change any Text font, use the defaults.

nosf: do not change Sans-Serif Text fonts, use the defaults.

nott: do not change Typewriter Text fonts, use the defaults.

onlyrm: equivalent to the last two combined.

fulloldstyle: equivalent to options oldstyle and oldstylemath.

fulloldstylenums: equivalent to options oldstylenums and oldstylenumsmath.

1.2 Options for Text fonts *only*

lighttext: switches to *light* Text fonts.

Two more weights are provided by kpfonts-otf.sty: with the *lighttext* (or *light*) option, *Semibold* and *Extrabold* vs *Light* and *Semibold* without it. These weights are available through \ltseries, \sbseries and \ebseries commands to be used in a group or alternatively through one argument commands \textlt{ }, \textsb{ } and \texteb{ }.

{\sbseries\itshape Foo} or \textsb{\textit{Foo}} print *Foo*.

1. Unicode names often differ from AMS names.

oldstylenums: provides lowercase digits as a default.

To get uppercase digits locally: `{\addfontfeature{Numbers=Lining} 123}`.

Examples, upright, italic, bold and bolditalic:

— `o123456789!`

— `o123456789!`

— `o123456789!`

— `o123456789!`

oldstyle: provides lowercase digits as a default, long-tailed Q (Quebec) and (for Roman and Sans-Serif fonts only) old style ligatures « ct » et « st ».

Examples:

— `Quest for an attractive font!`

— `Quest for an attractive font!`

— `Quest for an attractive font!`

— `QueST FOR AN ATTRACTIVE FONT!`

— `Quest for an attractive font!`

— `QueST FOR AN ATTRACTIVE FONT!`

veryoldstyle: same as option `oldstyle` but the round ‘s’ is replaced by the long one ‘f’, unless it ends a word (then it remains ‘s’)² and ancient ligatures `fi`, `fl`, `ft` are activated. Coding `s=` prints a round ‘s’ anytime; in most cases this coding is not necessary with LuaTeX, f.i. `\textit{some of Highlands’ mysterious castles...}` will print *some of Highlands’ mysterious castles...* which is correct; with XeTeX an `=` sign must be added at the end of `mysterious=` to get a round ‘s’ there : final ‘s’ followed by a punctuation sign is never turned into ‘f’, when followed by a space it is a trickier, see option `longs` below.

longs inhibits the transformation of an ‘s’ followed by a space into ‘f’. This option, available only with LuaTeX, is silently switched on by `veryoldstyle`; it is used explicitly in the present document to deal with the examples of long ‘s’ shown in the preceding item.

largesmallcaps: prints larger SMALL CAPS than the default ones (PETITE CAPS).

altfligs : prints alternative shapes for ligatures `fi`, `fl`, `ffi`, `ffl` instead of `fi`, `fl`, `ffi`, `ffl`.

germandbls : `\SS` prints `SS` instead of `ß` (capital *Eszett*), ditto for small/petite caps.

eurosym : replaces the Euro character (€) by the official symbol (€) (available in regular, italic, bold and et bolditalic) ; the `\KPeuro` command is also provided to print the official symbol, it accepts an optionnal argument : `\kpeuro[1,50]{}` prints 1,50 € (with a nobreak space).

harfbuzz : switches `Renderer=Harfbuzz` for HBLuaTeX engine; up to version 0.34, this renderer was silently activated but seldom useful.

1.3 Options for Math fonts *only*

lightmath: uses *light* Math fonts.

2. The OpenType `calt` feature is used to catch ‘s’ ending a word.

bbsans: command `\mathbb` prints Sans-Serif Blackboard Bold capitals with Serif fonts too: compare $\mathbb{C}, \mathbb{K}, \mathbb{N}, \mathbb{Q}, \mathbb{R}, \mathbb{Z}$, with $\mathbb{C}, \mathbb{K}, \mathbb{N}, \mathbb{Q}, \mathbb{R}, \mathbb{Z}$ (default).

frenchstyle: Latin uppercase letters and all Greek letters are printed upright, only lowercase latin letters are printed in italics; this follows the French typographic usage.

oldstylenumsmath: prints lowercase digits in Maths (default is uppercase).

narrowiints: prints condensed repeated integrals :

$\int\int\int$ et \iiint instead of \iiint et \iiint (default).

partialup: the `\partial` symbol is printed upright ∂ instead of ∂ .

fancyReIm: commands `\Re` et `\Im` print \Re et \Im respectively instead of \Re et \mathbb{I} .

tight: horizontal spaces tightened in math mode (same settings as `fourier-otf`).

noDcommand: do not define `\D` to avoid incompatibilities with other packages.

Option `mathcal` has been deleted: commands `\mathcal{ABC}` and `\mathscr{ABC}` now print ABC and \mathcal{ABC} respectively when `kpfonts-otf.sty` is loaded.

2 Another way to load Kp-fonts

Loading Kp-fonts through `kpfonts-otf.sty` offers only a limited choice of options; the standard commands `\setmainfont`, `\setsansfont`, `\setmonofont`, `\setmathfont` offer much more flexibility.

On the other hand, `kpfonts-otf.sty` defines a lot of useful commands to access AMS and specific Kp-fonts symbols. Loading `kpfonts-otf` with the `symbols` option enables to get all these commands defined without loading any font:

```
\usepackage[symbols]{kpfonts-otf}
```

Please note that `unicode-math`³ (and `fontspec`) are loaded by this procedure, no need to do it again, unless specific options are required, then `unicode-math` has to be loaded before `kpfonts-otf`, f.i.:

```
\usepackage[math-style=ISO,bold-style=upright]{unicode-math}
\usepackage[symbols]{kpfonts-otf}
```

Then, it is up to the user to load Kp-fonts with whatever option he/she likes using commands

```
\set...font{font}[options].
```

For documents requiring no Math fonts, loading `fontspec` and using the `\set...font` commands is enough, no need to load `kpfonts-otf` at all.

3. A carefull reading of both manuals `unicode-math.pdf` and `fontspec.pdf` (available in all TeX distributions) is required in order to take full advantage of these packages.

2.1 Options for Text fonts

Here are the options available for Text Kp-fonts:

Numbers=Lowercase to get lowercase digits 1,2,3 instead of 1,2,3; the default is **Numbers=Lining**.

SmallCapsFeatures = {Letters=SmallCaps} the `\textsc{}` command will print larger SMALL CAPS than the default PETITE CAPS.

The default setting⁴, is **SmallCapsFeatures = {Letters=PetiteCaps}**.

Ligatures=TeX (default) ' !` ?` -- --- print respectively ' i ÿ - —.

Ligatures=Common (default) automatic ligatures ff ffi ffl fi fl.

StylisticSet=1 provides an alternative for glyphs ffi ffl fi fl (ff is unchanged).

Ligatures=Required: adds ft et tt ligatures.

Ligatures=Rare adds çt et st ligatures.

Style=Swash to get the long-tailed capital Q: Queen, also in small caps (both sizes): QUEEN and QUEEN.

Style=Historic replaces any instance of 's' by the long variant f. It is still possible to get a round 's' coding it as 's=' specially at end of words; see options `veryoldstyle` and `longs` p. 3 for more details.

Ligatures=Historic switches specific ligatures for the long f: fi, fl, ft.

StylisticSet=2: \SS prints SS instead of ß (capital *Eszett*), ditto for small/petite caps.

StylisticSet=3: replaces the Euro character (€) by the official symbol (€) (available in regular, italics, bold and et bolditalic).

Options may be are chosen for each font, say:

```
\setmonofont{KpMono}[Numbers=Lowercase,Style=Historic]
```

but can also be shared by different typefaces:

```
\defaultfontfeatures+[KpRoman,KpSans,KpMono]{Numbers=Lowercase}
\defaultfontfeatures+[KpRoman,KpSans]{%
  Ligatures = Rare,
  Style = Swash,
  SmallCapsFeatures = {Letters=PetiteCaps},
}
\setmainfont{KpRoman}
\setsansfont{KpSans}
\setmonofont{KpMono}
```

Notes : 1. `\setmonofont{KpMono}`, `\setsansfont{KpSans}`, `\setmainfont{KpRoman}` rely on files `KpMono.fontspec`, `KpSans.fontspec` and `KpRoman.fontspec` installed by `Kpfonts`.

4. Changed in v0.37 to match the original `kpfonts` package.

2. Note the + ending `\defaultfontfeatures+`: options are *added*, not overwriting any other (including those of `fontspec.cfg`).

3. Options can be gathered: `Ligatures={Rare,Historic}` (with braces) is equivalent to `Ligatures=Rare` and `Ligatures=Historic`.

4. These options can also be switched on and off *locally* using `\addfontfeatures` inside a group, f.i. to print lowercase digits `1234576890` with a font loaded with option `Numbers=Lining`:

```
{\addfontfeatures{Numbers=Lowercase}1234576890}
```

Actually, a shortcut is available in this case: `\oldstylenums{1234576890}`.

5. With the `KpRoman`, it is possible to define two more weights *Light* and *Semibold* borrowed from `KpLight`:

```
\newfontfamily\KpLight{\KpLight}[<same options as KpRoman>]
\newcommand*\ltseries{\KpLight}
\newcommand*\sbseries{\KpLight\bfseries}
\DeclareTextFontCommand{\textlt}{\ltseries}
\DeclareTextFontCommand{\textsb}{\sbseries}
```

These weights are then available through `\ltseries`, `\sbseries` commands to be used in a group or alternatively through one argument commands `\textlt{}{}` and `\textsb{}{}`.

With the `KpLight`, weights *Semibold* and *Extrabold* can be defined similarly.

2.2 Options for Math fonts

The following options can be passed either to `unicode-math`⁵ or to `\setmathfont{}`:

math-style = ISO, TeX (défaut), french, upright;

bold-style = ISO, TeX (défaut), upright;

partial = upright (default italic);

nabla = italic (default upright);

Seven ‘Style Variants’ are available with Kp-fonts, here are the first three:

Style=mathcal (+ss01) commands `\mathcal{}{}` and `\mathscr{}{}` print *ABC* instead of *A \mathcal{B} C* (default), see note below;

Style=bbsans (+ss02) `\mathbb{}{}` prints Sans-Serif Blackboard bold capitals *A \mathbb{B} C* for Serif Math fonts `KpMath-Regular` and `KpMath-Light` instead of *A \mathbb{B} C*;

Style=narrowiints (+ss03) provides condensed repeated integrals: $\int\int\int$ instead of \iiint (default).

Note: if you want commands `\mathcal{ABC}` and `\mathscr{ABC}` to print *ABC* and *A \mathcal{B} C* respectively, you can use `unicode-math`’s option `range` this way:

```
\setmathfont{KpMath-Regular}[options]
```

```
\setmathfont{KpMath-Regular}[range={cal,bfcal},StylisticSet=1]
```

5. See the manual `unicode-math.pdf`.

The first line loads **KpMath** as usual, the second one modifies `\mathcal{}` command's output.

The next four tables present the other Style Variants available:

Table 1 – Style=leqslant (+ss04)

Command	Default	Variant
<code>\leq</code>	\leq	\leqslant
<code>\geq</code>	\geq	\geqslant
<code>\nleq</code>	$\not\leq$	$\not\leqslant$
<code>\ngeq</code>	$\not\geq$	$\not\geqslant$
<code>\leqq</code>	$\leq\leq$	$\leq\leqslant$
<code>\geqq</code>	$\geq\geq$	$\geq\geqslant$
<code>\leqless</code>	$\leq\lessdot$	$\leq\lessdotslant$
<code>\eqgtr</code>	$\leq\gtrdot$	$\leq\gtrdotslant$
<code>\lesseqgtr</code>	$\leq\gtrdot\leq$	$\leq\gtrdot\leqslant$
<code>\gtreqless</code>	$\gtrdot\leq$	$\gtrdot\leqslant$
<code>\lesseqqgtr</code>	$\leq\gtrdot\leq\leq$	$\leq\gtrdot\leq\leqslant$
<code>\gtreqqless</code>	$\gtrdot\leq\leq$	$\gtrdot\leq\leqslant$

Table 2 – Style=smaller (+ss05)

Command	Default	Variant
<code>\mid</code>	$ $	$\! $
<code>\nmid</code>	$\! $	$\! $
<code>\parallel</code>	\parallel	\parallel
<code>\nparallel</code>	$\not\parallel$	$\not\parallel$
<code>\parallelslant</code>	\parallel	\parallel
<code>\nparallelslant</code>	$\not\parallel$	$\not\parallel$

Table 3 – Style=subsetneq (+ss06)

Command	Default	Variant
<code>\subsetneq</code>	\subsetneq	\subsetneq
<code>\supsetneq</code>	\supsetneq	\supsetneq
<code>\subsetneqq</code>	\subsetneqq	\subsetneqq
<code>\supsetneqq</code>	\supsetneqq	\supsetneqq

Table 4 – Style=parallelslant (+ss07)

Command	Default	Variant
<code>\parallel</code>	\parallel	\parallel
<code>\nparallel</code>	$\not\parallel$	$\not\parallel$
<code>\shortparallel</code>	\parallel	\parallel
<code>\nshortparallel</code>	$\not\parallel$	$\not\parallel$

Example: switching styles 4 (leqslant) and 6 (subsetneq) can be achieved coding either `\setmathfont{KpMath-Regular.otf}[StylisticSet={4,6}]` or `\setmathfont{KpMath-Regular.otf}[Style={leqslant,subsetneq}]` but this second syntax is available only if `kpfonts-otf.sty` has been loaded (eventually with the `symbols` option).

Table 5 on the following page shows the available ‘Glyphs Variants’:

Example: with `\setmathfont{KpMath-Regular.otf}[CharacterVariant={3,6}]` commands `\epsilon` and `\phi` print ϵ and ϕ instead of ϵ et ϕ . The same is true of course for all shapes and and weights (upright, bold, bolditalic, sans-derif, etc.): f.i. with `math-syle=french`, `\epsilon` and `\phi` print ϵ and ϕ .

Note about `\hbar`: `unicode-math` defines `\hbar` as `\hslash` (U+210F) while `amsmath` provides two different glyphs (italic h with horizontal or diagonal stroke). `kpfonts-otf` now follows `unicode-math`; the italic h with horizontal stroke can be printed using `\hslash` or `\hbar` together with character variant `cv01` or with `\mathbar`

Table 5 – Glyphs Variants

	Default		Variant		Command	
cv00	\Re	\Im	\Re	\Im	<code>\Re</code>	<code>\Im</code>
cv01		\hbar		\hbar	<code>\hslash</code> or <code>\hbar</code>	
cv02		\emptyset		\emptyset	<code>\emptyset</code>	
cv03		ε		ε	<code>\epsilon</code>	
cv04		κ		κ	<code>\kappa</code>	
cv05		π		ϖ	<code>\pi</code>	
cv06		ϕ		φ	<code>\phi</code>	
cv07		ρ		ϱ	<code>\rho</code>	
cv08		σ		ς	<code>\sigma</code>	
cv09		θ		ϑ	<code>\theta</code>	
cv10		Θ		Θ	<code>\Theta</code>	

(replacement for AMS' command `\hbar`).

3 Kp-fonts specific commands

3.1 Integrals

Kp-fonts offers variants for integral symbols suitable for indefinite integrals, they are coded as `\varint`, `\variint`, `\variiint`, `\variiiiint` and `\varidotsint`. Compare $\int f(t) dt$ and $\int f(t) dt$ and also

$$\int f(t) dt \quad \text{and} \quad \int f(t) dt$$

`\D{...}` prints an upright 'd' and improves kernings around the differential element:
`\displaystyle\varint f(t)\D{t}` donne $\int f(t) dt$.

3.2 Specific Math symbols

The next tables present symbols unavailable as Unicode characters, they are coded in Kp-fonts' private zone.

<code>\mmapsto</code>	\mapsto	<code>\longmmapsto</code>	\longmapsto
<code>\mmapsfrom</code>	\mapsfrom	<code>\longmmapsfrom</code>	\longmapsfrom
<code>\Mmapsto</code>	\Mmapsto	<code>\Longmmapsto</code>	\Longmmapsto
<code>\Mmapsfrom</code>	\Mmapsfrom	<code>\Longmmapsfrom</code>	\Longmmapsfrom
<code>\leftrightdasharrow</code>	\leftrightarrow	<code>\leadsto</code>	\leadsto

<code>\boxright</code>	$\square\rightarrow$		<code>\boxleft</code>	$\leftarrow\square$
<code>\circangleright</code>	$\bigcirc\rightarrow$		<code>\circleleft</code>	$\leftarrow\bigcirc$
<code>\Diamondright</code>	$\blacklozenge\rightarrow$		<code>\Diamondleft</code>	$\leftarrow\blacklozenge$
<code>\boxdotright</code>	$\square\rightarrow\cdot$		<code>\boxdotleft</code>	$\leftarrow\square\cdot$
<code>\circledotright</code>	$\bigcirc\rightarrow\cdot$		<code>\circledotleft</code>	$\leftarrow\bigcirc\cdot$
<code>\Diamonddotright</code>	$\blacklozenge\rightarrow\cdot$		<code>\Diamonddotleft</code>	$\leftarrow\blacklozenge\cdot$
<code>\boxRight</code>	$\square\Rightarrow$		<code>\boxLeft</code>	$\Leftarrow\square$
<code>\boxdotRight</code>	$\square\Rightarrow\cdot$		<code>\boxdotLeft</code>	$\Leftarrow\square\cdot$
<code>\DiamondRight</code>	$\blacklozenge\Rightarrow$		<code>\DiamondLeft</code>	$\Leftarrow\blacklozenge$
<code>\DiamonddotRight</code>	$\blacklozenge\Rightarrow\cdot$		<code>\DiamonddotLeft</code>	$\Leftarrow\blacklozenge\cdot$
<code>\multimapdot</code>	$\multimap\cdot$		<code>\multimapdotinv</code>	$\cdot\multimap$
<code>\multimapdotboth</code>	$\multimap\cdot\cdot$			
<code>\multimapbothvert</code>	$\cdot\multimap\cdot$		<code>\multimapdotbothvert</code>	$\cdot\cdot\multimap$
<code>\multimapdotbothAvert</code>	$\cdot\cdot\multimap$		<code>\multimapdotbothBvert</code>	$\cdot\cdot\multimap$
<code>\capplus</code>	$\cap+$		<code>\sqcupplus</code>	$\sqcup+$
<code>\parallelslant</code>	\parallel		<code>\colonsim</code>	\sim
<code>\parallelbackslant</code>	$\backslash\parallel$		<code>\Colonsim</code>	\approx
<code>\eqqColon</code>	\equiv		<code>\Colondash</code>	\dashv
<code>\strictif</code>	\rightarrow		<code>\strictfi</code>	\leftarrow
<code>\circledvee</code>	$\bigcirc\vee$		<code>\circledwedge</code>	$\bigcirc\wedge$
<code>\openJoin</code>	\times		<code>\opentimes</code>	\times
<code>\lambdaslash</code>	λ		<code>\lambdabar</code>	$\bar{\lambda}$
<code>\idotsint</code>	$\int\cdots\int$			
<code>\ointclockwise</code>	\oint		<code>\varointctrlockwise</code>	\oint
<code>\oiintclockwise</code>	\oiint		<code>\oiintctrlockwise</code>	\oiint
<code>\varoiintclockwise</code>	\varoiint		<code>\varoiintctrlockwise</code>	\varoiint
<code>\oiiiiintclockwise</code>	\oiiiiint		<code>\oiiiiintctrlockwise</code>	\oiiiiint
<code>\varoiiiiintclockwise</code>	\varoiiiiint		<code>\varoiiiiintctrlockwise</code>	\varoiiiiint
<code>\sqiiint</code>	\sqiiint		<code>\sqiiiint</code>	\sqiiiint

The full list of Unicode symbols available with Kp-fonts is shown in file `unimath-kpfonts.pdf`.

3.3 Wide accents

— `\widehat` and `\widetilde`

$$\hat{x} \widehat{xx} \widehat{xxx} \widehat{xxxx} \widehat{xxxxx} \widehat{xxxxxx} \tilde{x} \widetilde{xx} \widetilde{xxx} \widetilde{xxxx} \widetilde{xxxxx} \widetilde{xxxxxx}$$

— `\overline` and `\underline`

$$\overline{x} \overline{xy} \overline{xyz} \overline{A \cup B} \overline{A \cup (B \cap C) \cup D} \underline{m+n+p}$$

— `\wideoverbar`, `\widecheck` et `\widebreve`

$$\wideoverbar{x} \wideoverbar{xy} \wideoverbar{xyz} \widecheck{x} \widecheck{xxxx} \widecheck{xxxxxx} \widebreve{x} \widebreve{xxx} \widebreve{xxxxx}$$

— `\overparen` and `\underparen`

$$\overparen{x} \overparen{xy} \overparen{xyz} \overparen{A \cup B} \overparen{A \cup (B \cap C) \cup D} \overparen{x+y}^2 \overparen{a+b+\dots+z}^{26}$$

$$\underparen{x} \underparen{xz} \underparen{xyz} \underparen{x+z}^2 \underparen{a+b+\dots+z}^{26}$$

— `\overbrace` and `\underbrace`

$$\overbrace{a} \overbrace{ab} \overbrace{abc} \overbrace{abcd} \overbrace{abcde} \overbrace{a+b+c}^3 \overbrace{a+b+\dots+z}^{26}$$

$$\underbrace{a} \underbrace{ab} \underbrace{abc} \underbrace{abcd} \underbrace{abcde} \underbrace{a+b+c}_3 \underbrace{a+b+\dots+z}_{26}$$

— `\overrightarrow` and `\overleftarrow`

$$\overrightarrow{v} \overrightarrow{M} \overrightarrow{vv} \overrightarrow{AB} \overrightarrow{ABC} \overrightarrow{ABCD} \overrightarrow{ABCDEFGH}$$

$$\overleftarrow{v} \overleftarrow{M} \overleftarrow{vv} \overleftarrow{AB} \overleftarrow{ABC} \overleftarrow{ABCD} \overleftarrow{ABCDEFGH}$$

— Enfin `\widearc` and `\widearcarrow` (ou `\overrightarrowarc`)

$$\widearc{AMB} \widearc{AMB}$$

3.4 Math Versions

Different versions of the **KpMath** fonts may be defined in the document's preamble:

```
\setmathfont{KpMath-Regular.otf}[version=base, options ]
```

```
\setmathfont{KpMath-Bold.otf}[version=bold, options ]
```

```
\setmathfont{KpMath-Semibold.otf}[version=semibold, options ]
```

```
\setmathfont{KpMath-Sans.otf}[version=sans, options ]
```

```
\setmathfont{KpMath-Light.otf}[version=light, options ]
```

then, it is easy to switch from one version to another one with `\mathversion{name}`.

Example⁶:

6. Option `CharacterVariant=3` changes ϵ into ε .

```

\setmathfont{KpMath-Regular.otf}[Style=leqslant, CharacterVariant=3]
\setmathfont{KpMath-Bold.otf}[version=bold,
    Style=leqslant, CharacterVariant=3]
\setmathfont{KpMath-Sans.otf}[version=sans,
    Style=leqslant, CharacterVariant=3]

```

Here is the same equation in three versions, normal, bold and Sans-Serif:

$$\mathbb{E}_i(N_i) = \sum_{n \geq 1} P_i(N_i \geq n) = \frac{\varepsilon_i}{1 - \varepsilon_i} < +\infty$$

```
\mathversion{bold}
```

$$\mathbb{E}_i(N_i) = \sum_{n \geq 1} P_i(N_i \geq n) = \frac{\varepsilon_i}{1 - \varepsilon_i} < +\infty$$

```
\mathversion{sans}
```

$$\mathbb{E}_i(N_i) = \sum_{n \geq 1} P_i(N_i \geq n) = \frac{\varepsilon_i}{1 - \varepsilon_i} < +\infty$$