

**Package name:** heuristica (Utopia)

**Derived from:** Utopia (free version)

**Weights and shapes:** {m, b}, {n, it}.

## Features:

- full set of f-ligatures;
- SMALL CAPS in regular weight, upright shape only;
- monospaced lining figures 0123456789;
- taboldstyle (monospaced) figures 0123456789—option `osf` makes these the default text figures, while using lining figures for math;
- superior figures <sup>0123456789</sup>. The option `sup`s will force footnote markers to use them;
- Option `space` (default value 1.2) multiplies `fontdimen2` by that factor, making for a less cramped appearance.

## Typical invocation:

```
\usepackage{textcomp}
\usepackage[osf,scaled=.95]{heuristica} % osf for text, not math
\usepackage{cabin} % sans serif
\usepackage[varqu,varl]{inconsolata} % sans serif typewriter
\usepackage[utopia,bigdelims,vvarbb]{newtxmath} % bb from STIX
\usepackage[cal=boondoxo]{mathalfa} % mathcal
```

## Example using this preamble:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

The typeset math below follows the ISO recommendations that only variables be set in italic. Note the use of upright shapes for  $d$ ,  $e$  and  $\pi$ . (The first two are entered as `\mathrm{d}` and `\mathrm{e}`, and in fonts derived from `mtpro2` or `newtxmath`, the latter is entered as `\uppi`.)

**Simplest form of the *Central Limit Theorem*:** Let  $X_1, X_2, \dots$  be a sequence of iid random variables with mean 0 and variance 1 on a probability space  $(\Omega, \mathcal{F}, \mathbb{P})$ . Then

$$\mathbb{P}\left(\frac{X_1 + \dots + X_n}{\sqrt{n}} \leq y\right) \rightarrow \Re(y) := \int_{-\infty}^y \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty,$$

or, equivalently, letting  $S_n := \sum_1^n X_k$ ,

$$\mathbb{E}f(S_n/\sqrt{n}) \rightarrow \int_{-\infty}^{\infty} f(t) \frac{e^{-t^2/2}}{\sqrt{2\pi}} dt \quad \text{as } n \rightarrow \infty, \text{ for every } f \in \mathcal{BC}(\mathbb{R}).$$