

**Package name:** XCharter (Charter)

**Derived from:** Bitstream Charter (free version)

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

**Features:**

- full set of f-ligatures;
- SMALL CAPS in all weights and shapes;
- tabular lining figures 0123456789;
- proportional oldstyle figures with two choices for ‘one’: 0123456789 and 0123456789—options `osf` and `osfI` set the default figure style in text accordingly;
- superior figures <sup>0123456789</sup>. The option `sup` forces their use as footnote markers;
- very plain but very readable, even at small sizes and lower resolutions.

**Typical invocation:**

```
\usepackage[full]{textcomp}
\usepackage[osf,sups,scaled=.97]{XCharter} % osf for text, not math
\usepackage{cabin} % sans serif
\usepackage[varqu,varl]{inconsolata} % sans serif typewriter
\usepackage[libertine,bigdelims,vvarbb,scaled=1.03]{newtxmath} % bb from STIX
\usepackage[cal=boondoxo]{mathalfa} % mathcal
```

**Example using this preamble:**

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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

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

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

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