The fixmath package for LaTeX 2ε

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LaTeX's default style of typesetting mathematics does unfortunately not comply with the International Standards ISO31-0:1992 to ISO31-13:1992, as summarized, e. g., in <http://physics.nist.gov/Document/typefaces.pdf>:

- Uppercase Greek letters are always typset upright, as opposed to italic, even though they are usually to represent variables.
- There is no obvious way to typset variables in a bold italic style, even though the required fonts are available. (The bm package is overly complex and not always reliable.)

If you are using the default Computer Modern math fonts, this can be fixed by loading the package fixmath:

- Uppercase Greek will be typeset in italic style then.
- Upright Δ and Ω symbols are still available through the commands `\upDelta` and `\upOmega`.
- A new math alphabet `\mathbold` will provide bold italic letters.

The fixmath package should be used *only* in conjunction with the CM math fonts; most likely, it will not work with others. Many packages for using alternative math fonts, such as mathpazo (for Palatino), provide the `\mathbold` alphabet already and can be loaded with an option `slantedGreek` to make the uppercase Greek letters cursive.

The package code

Save uppercase Δ and Ω:

```
1 ⟨*package⟩
2 \let\upOmega\Omega
3 \let\upDelta\Delta
```

Provide italic uppercase Greek:

```
4 \DeclareMathSymbol{\Gamma}{\mathalpha}{letters}{0}
5 \DeclareMathSymbol{\Delta}{\mathalpha}{letters}{1}
6 \DeclareMathSymbol{\Theta}{\mathalpha}{letters}{2}
7 \DeclareMathSymbol{\Lambda}{\mathalpha}{letters}{3}
```

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```
\DeclareMathSymbol{\Xi}{\mathalpha}{letters}{4}
\DeclareMathSymbol{\Pi}{\mathalpha}{letters}{5}
\DeclareMathSymbol{\Sigma}{\mathalpha}{letters}{6}
\DeclareMathSymbol{\Upsilon}{\mathalpha}{letters}{7}
\DeclareMathSymbol{\Phi}{\mathalpha}{letters}{8}
\DeclareMathSymbol{\Psi}{\mathalpha}{letters}{9}
\DeclareMathSymbol{\Omega}{\mathalpha}{letters}{10}
```

Prepare lowercase Greek for `\mathbold`:

```
\DeclareMathSymbol{\alpha}{\mathalpha}{letters}{11}
\DeclareMathSymbol{\beta}{\mathalpha}{letters}{12}
\DeclareMathSymbol{\gamma}{\mathalpha}{letters}{13}
\DeclareMathSymbol{\delta}{\mathalpha}{letters}{14}
\DeclareMathSymbol{\epsilon}{\mathalpha}{letters}{15}
\DeclareMathSymbol{\zeta}{\mathalpha}{letters}{16}
\DeclareMathSymbol{\eta}{\mathalpha}{letters}{17}
\DeclareMathSymbol{\theta}{\mathalpha}{letters}{18}
\DeclareMathSymbol{\iota}{\mathalpha}{letters}{19}
\DeclareMathSymbol{\kappa}{\mathalpha}{letters}{20}
\DeclareMathSymbol{\lambda}{\mathalpha}{letters}{21}
\DeclareMathSymbol{\mu}{\mathalpha}{letters}{22}
\DeclareMathSymbol{\nu}{\mathalpha}{letters}{23}
\DeclareMathSymbol{\xi}{\mathalpha}{letters}{24}
\DeclareMathSymbol{\pi}{\mathalpha}{letters}{25}
\DeclareMathSymbol{\rho}{\mathalpha}{letters}{26}
\DeclareMathSymbol{\sigma}{\mathalpha}{letters}{27}
\DeclareMathSymbol{\tau}{\mathalpha}{letters}{28}
\DeclareMathSymbol{\upsilon}{\mathalpha}{letters}{29}
\DeclareMathSymbol{\phi}{\mathalpha}{letters}{30}
\DeclareMathSymbol{\chi}{\mathalpha}{letters}{31}
\DeclareMathSymbol{\psi}{\mathalpha}{letters}{32}
\DeclareMathSymbol{\omega}{\mathalpha}{letters}{33}
\DeclareMathSymbol{\varepsilon}{\mathalpha}{letters}{34}
\DeclareMathSymbol{\vartheta}{\mathalpha}{letters}{35}
\DeclareMathSymbol{\varpi}{\mathalpha}{letters}{36}
\DeclareMathSymbol{\varphi}{\mathalpha}{letters}{39}
\DeclareMathSymbol{\varrho}{\mathalpha}{letters}{37}
\DeclareMathSymbol{\varsigma}{\mathalpha}{letters}{38}
```

Define `\mathbold`:

```
\DeclareMathAlphabet{\mathbold}{OML}{cmm}{b}{it}
```

⟨/package⟩

The next line of code prevents DocStrip from adding the character table to all modules:

```
\endinput
```