`mtgreek`, a package for enabling upright and italic Greek math letters with MathTime^{TM*}

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1 Introduction

This package is an add-on to the `MathTime` style, a style to provide TeX support for the use of the MathTime^{TM} commercially distributed by Y&Y, Inc.

The style file for MathTime has hard-wired uppercase Greek letters, they are upright and only upright, though the fonts come with italic letters as well for each and every weight. This package provides a switch to choose between both kinds of Greek uppercase letters.

`\uprightupcasegreek` `\italicupcasegreek` With the command `\uprightupcasegreek` you turn to upright letters, with `\italicupcasegreek` you turn to italics.

2 Realization

The whole stuff is realized by tweaking NFSS2, since Greek characters are distributed rather madly in the fonts. In fact, after a no-op option processing event

```
1 \ProcessOptions\relax
```

and the explicit care, that we do not tweak the original math font setup,

```
2 \RequirePackage{mathtime}
```

we in fact adapt the core LaTeX2e routines for command-character mapping `\DeclareMathSymbol` and `\set@mathsymbol` by throwing away all warning, other operators or `\@onlypreamble`-stuff.

`\mtg@realloc` The macro `\mtg@realloc` turns the decimal digit into a hexadecimal one (why isn't there a central routine for more than one digit?) and calls `\mtg@re@lloc`,

```
3 \def\mtg@realloc#1#2{%
```

*This file has version number v0.01, last revised on 1999/07/29, documentation dated 1999/07/29.

```
\begingroup
\count\z@=#2\relax
\count\tw@\count\z@
\divide\count\z@\sixt@@n
\count@\count\z@
\multiply\count@\sixt@@n
\advance\count\tw@-\count@
\expandafter\mtg@re@lloc
#1{\hexnumber@{\count\z@}\hexnumber@{\count\tw@}}%
\endgroup}
```

`\@mtg@re@lloc` then overwrites the `\mathchardef`inition for a single letter.

```
\def\mtg@re@lloc#1#2{\global\mathchardef#1="01#2\relax }
```

The two switches take the character codes and plug them into the appropriate letter commands, e basta così!

```
\newcommand *\uprightupcasegreek {%
  \mtg@realloc\Gamma   {48}\mtg@realloc\Delta   {49}%
  \mtg@realloc\Theta   {50}\mtg@realloc\Lambda  {51}%
  \mtg@realloc\Xi      {52}\mtg@realloc\Pi      {53}%
  \mtg@realloc\Sigma   {54}\mtg@realloc\Upsilon {55}%
  \mtg@realloc\Phi     {56}\mtg@realloc\Psi     {57}%
  \mtg@realloc\Omega  {127}}
\newcommand *\italicupcasegreek {%
  \mtg@realloc\Gamma    {0}\mtg@realloc\Delta    {1}%
  \mtg@realloc\Theta    {2}\mtg@realloc\Lambda   {3}%
  \mtg@realloc\Xi       {4}\mtg@realloc\Pi       {5}%
  \mtg@realloc\Sigma    {6}\mtg@realloc\Upsilon  {7}%
  \mtg@realloc\Phi      {8}\mtg@realloc\Psi      {9}%
  \mtg@realloc\Omega    {10}}
```

Change History

v0.01

General: Initial Revision (KT). . . . 1

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