The unicode-math test suite

Will Robertson

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Preamble

The following pieces of output are generated from the code shown. As well as being good minimal examples, these tests are useful to ensure that new bugs don't affect old behaviour. When the test suite is run, the new output is compared pixel by pixel with that shown here and warnings produced if the outputs are not identical.

1   Test 001a

```
\input{umtest-preamble}
\usepackage[math-style=TeX]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINtext\]
\[\latintext\]
\[\LATINmath\]
\[\latinmath\]
\end{document}
```

$ABCDEFGHIJKLMNOPQRSTUVWXYZ$

$abcdefghijklmnopqrstuvwxyz$

$ABCDEFGHIJKLMNOPQRSTUVWXYZ$

$abcdefghijklmnopqrstuvwxyz$

2   Test 001b

```
\input{umtest-preamble}
\usepackage[math-style=ISO]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINtext\]
\[\latintext\]
\[\LATINmath\]
\[\latinmath\]
\end{document}
```

$ABCDEFGHIJKLMNOPQRSTUVWXYZ$

$abcdefghijklmnopqrstuvwxyz$

$ABCDEFGHIJKLMNOPQRSTUVWXYZ$

$abcdefghijklmnopqrstuvwxyz$

3 Test 001c

```
\input{umtest-preamble}
\usepackage[math-style=literal]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINtext\]
\[\latintext\]
\[\LATINmath\]
\[\latinmath\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

4 Test 001d

```
\input{umtest-preamble}
\usepackage[math-style=French]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINtext\]
\[\latintext\]
\[\LATINmath\]
\[\latinmath\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

5 Test 002a

```
\input{umtest-preamble}
\usepackage[math-style=TeX]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\GREEKtext\]
\[\greektext\]
\[\GREEKmath\]
\[\greekmath\]
\end{document}
```

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6   Test 002b

```
\input{umtest-preamble}
\usepackage[math-style=ISO]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\GREEKtext\]
\[\greektext\]
\[\GREEKmath\]
\[\greekmath\]
\end{document}
```

$ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ$

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7   Test 002c

```
\input{umtest-preamble}
\usepackage[math-style=literal]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\GREEKtext\]
\[\greektext\]
\[\GREEKmath\]
\[\greekmath\]
\end{document}
```

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$αβγδεεζηθθικϰλμνξοπϖρϱςστυφφχψω$

8   Test 002d

```
\input{umtest-preamble}
\usepackage[math-style=French]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\GREEKtext\]
\[\greektext\]
\[\GREEKmath\]
\[\greekmath\]
\end{document}
```

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9 Test 010a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathscr{\LATINtext}\]
\[\mathscr{\latintext}\]
\[\mathscr{\LATINmath}\]
\[\mathscr{\latinmath}\]
\end{document}
```

$$\mathscr{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$
$$\mathscr{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$

10 Test 010b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathscr\]
\[\latinmathscr\]
\[\reservedmathscr\]
\end{document}
```

$$\mathscr{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$

11 Test 010c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathfrak{\LATINtext}\]
\[\mathfrak{\latintext}\]
\[\mathfrak{\LATINmath}\]
\[\mathfrak{\latinmath}\]
\end{document}
```

$$\mathfrak{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathfrak{abcdefghijklmnopqrstuvwxyz}$$
$$\mathfrak{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathfrak{abcdefghijklmnopqrstuvwxyz}$$

12   Test 010d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathfrak\]
\[\latinmathfrak\]
\[\reservedmathfrak\]
\end{document}
```

𝔄𝔅ℭ𝔇𝔈𝔉𝔊ℌ𝔍𝔍𝔎𝔏𝔐𝔑𝔒𝔓𝔔ℜ𝔖𝔗𝔘𝔙𝔚𝔛𝔜ℨ

𝔞𝔟𝔠𝔡𝔢𝔣𝔤𝔥𝔦𝔧𝔨𝔩𝔪𝔫𝔬𝔭𝔮𝔯𝔰𝔱𝔲𝔳𝔴𝔵𝔶𝔷

13   Test 011a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathup{\LATINtext}\]
\[\mathup{\latintext}\]
\[\mathup{\LATINmath}\]
\[\mathup{\latinmath}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

14   Test 011b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathup{\GREEKtext}\]
\[\mathup{\greektext}\]
\[\mathup{\GREEKmath}\]
\[\mathup{\greekmath}\]
\end{document}
```

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15 Test 012a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathit{\LATINtext}\]
\[\mathit{\latintext}\]
\[\mathit{\LATINmath}\]
\[\mathit{\latinmath}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

16 Test 012b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathit{\GREEKtext}\]
\[\mathit{\greektext}\]
\[\mathit{\GREEKmath}\]
\[\mathit{\greekmath}\]
\end{document}
```

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

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αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

17 Test 013a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbb{\LATINtext}\]
\[\mathbb{\latintext}\]
\[\mathbb{\LATINmath}\]
\[\mathbb{\latinmath}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

18 Test 013b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbb{0123456789}\]
\[\numbersmathbb\]
\end{document}
```

$$0123456789$$

$$0123456789$$

19 Test 013c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathbb\]
\[\latinmathbb\]
\[\reservedmathbb\]
\end{document}
```

$$ABCDEFGHIJKLMNOPQRSTUVWXYZ$$

$$abcdefghijklmnopqrstuvwxyz$$

20 Test 013d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{STIXGeneral}
\begin{document}
\[ \mathbb{πΠγΓ} \qquad \mathbb{▯▯▯▯} \]
\[ \mathbb{\sum}_0^1 \]
\[ \mathbb{∑}_0^1 \]
\[ \Bbbsum_0^1 \]
\end{document}
```

$$\pi\Pi\gamma\Gamma \qquad \pi\Pi\gamma\Gamma$$

$$\sum_0^1$$

$$\sum_0^1$$

$$\sum_0^1$$

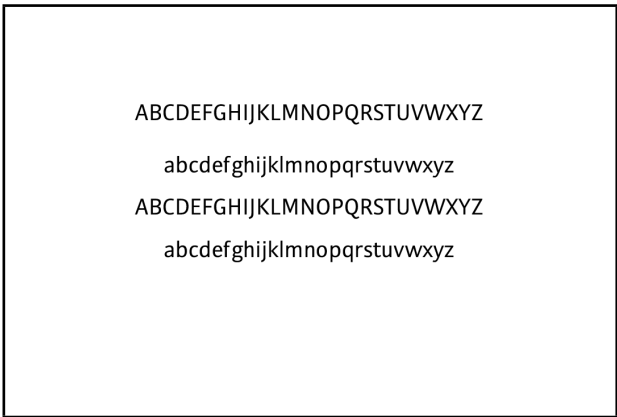## 21 Test 013e

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbbit{Ddeij}\qquad\mathbbit{𝔻𝕕𝕖𝕚𝕛}\]
\end{document}
```

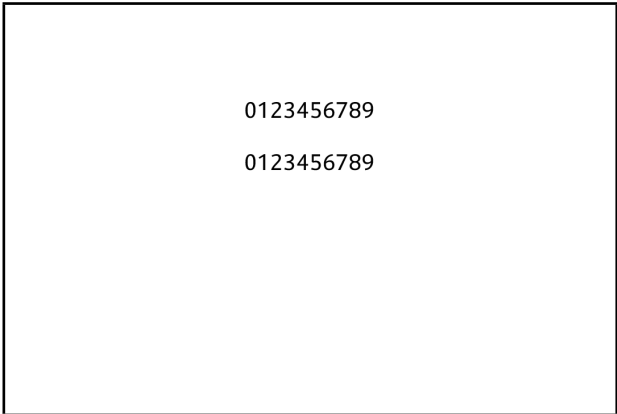$$\mathit{Ddeij} \qquad \mathit{Ddeij}$$

22 Test 014a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathsfup{\LATINtext}\]
\[\mathsfup{\latintext}\]
\[\mathsfup{\LATINmath}\]
\[\mathsfup{\latinmath}\]
\end{document}
```

$$\mathsf{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathsf{abcdefghijklmnopqrstuvwxyz}$$
$$\mathsf{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$
$$\mathsf{abcdefghijklmnopqrstuvwxyz}$$

23 Test 014b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathsfup{0123456789}\]
\[\numbersmathsfup\]
\end{document}
```

$$\mathsf{0123456789}$$
$$\mathsf{0123456789}$$

24 Test 014c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathsfup\]
\[\latinmathsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

25 Test 015a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathsfit{\LATINtext}\]
\[\mathsfit{\latintext}\]
\[\mathsfit{\LATINmath}\]
\[\mathsfit{\latinmath}\]
\[\mathsfit{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

26 Test 015b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathsfit\]
\[\latinmathsfit\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

27   Test 016a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[\mathtt{\LATINtext}\]
\[\mathtt{\latintext}\]
\[\mathtt{\LATINmath}\]
\[\mathtt{\latinmath}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

28   Test 016b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[\mathtt{0123456789}\]
\[\numbersmathtt\]
\end{document}
```

0123456789

0123456789

29   Test 016c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[\LATINmathtt\]
\[\latinmathtt\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

30   Test 017a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfscr{\LATINtext}\]
\[\mathbfscr{\latintext}\]
\[\mathbfscr{\LATINmath}\]
\[\mathbfscr{\latinmath}\]
\end{document}
```


31   Test 017b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathbfscr\]
\[\latinmathbfscr\]
\end{document}
```


32   Test 017c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbffrak{\LATINtext}\]
\[\mathbffrak{\latintext}\]
\[\mathbffrak{\LATINmath}\]
\[\mathbffrak{\latinmath}\]
\end{document}
```

33 Test 017d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathbffrak\]
\[\latinmathbffrak\]
\end{document}
```

𝕬𝕭𝕮𝕯𝕰𝕱𝕲𝕳𝕴𝕵𝕶𝕷𝕸𝕹𝕺𝕻𝕼𝕽𝕾𝕿𝖀𝖁𝖂𝖃𝖄𝖅

𝖆𝖇𝖈𝖉𝖊𝖋𝖌𝖍𝖎𝖏𝖐𝖑𝖒𝖓𝖔𝖕𝖖𝖗𝖘𝖙𝖚𝖛𝖜𝖝𝖞𝖟

34 Test 018a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfup{\LATINtext}\]
\[\mathbfup{\latintext}\]
\[\mathbfup{\LATINmath}\]
\[\mathbfup{\latinmath}\]
\[\mathbfup{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

35 Test 018b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfup{\GREEKtext}\]
\[\mathbfup{\greektext}\]
\[\mathbfup{\GREEKmath}\]
\[\mathbfup{\greekmath}\]
\end{document}
```

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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36   Test 019a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfit{\LATINtext}\]
\[\mathbfit{\latintext}\]
\[\mathbfit{\LATINmath}\]
\[\mathbfit{\latinmath}\]
\[\mathbfit{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

37   Test 019b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfit{\GREEKtext}\]
\[\mathbfit{\greektext}\]
\[\mathbfit{\GREEKmath}\]
\[\mathbfit{\greekmath}\]
\end{document}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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38   Test 020a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfsfit{\LATINtext}\]
\[\mathbfsfit{\latintext}\]
\[\mathbfsfit{\LATINmath}\]
\[\mathbfsfit{\latinmath}\]
\[\mathbfsfit{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

39 Test 020b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{STIXGeneral-Bold}
\begin{document}
\[\mathbfsfup{\GREEKtext}\]
\[\mathbfsfup{\greektext}\]
\[\mathbfsfup{\GREEKmath}\]
\[\mathbfsfup{\greekmath}\]
\end{document}
```

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱςστυφϕχψω

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱςστυφϕχψω

40 Test 021a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbfsfit{\LATINtext}\]
\[\mathbfsfit{\latintext}\]
\[\mathbfsfit{\LATINmath}\]
\[\mathbfsfit{\latinmath}\]
\[\mathbfsfit{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

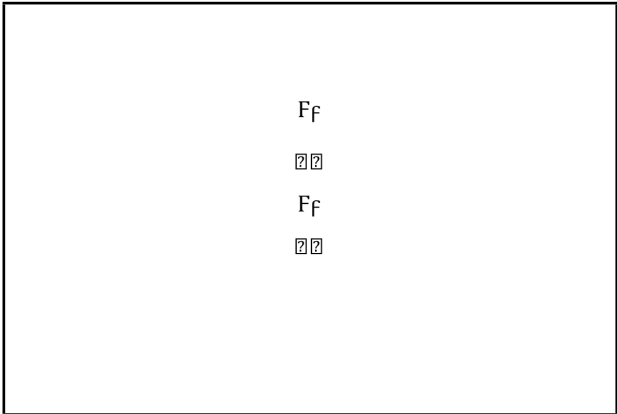*abcdefghijklmnopqrstuvwxyz*

0123456789

41 Test 021b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{STIXGeneral-BoldItalic}
\begin{document}
\[\mathbfsfit{\GREEKtext}\]
\[\mathbfsfit{\greektext}\]
\[\mathbfsfit{\GREEKmath}\]
\[\mathbfsfit{\greekmath}\]
\end{document}
```

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱςστυφϕχψω

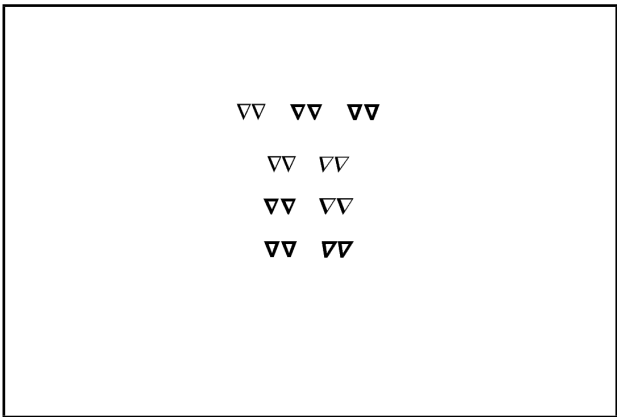*ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ*

αβγδεεζηθϑικκλμνξοπϖρϱςστυφϕχψω

42 Test 030a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[⬚⬚\]
\[⬚⬚\]
\[\mathup{⬚⬚}\]
\[\mathbf{⬚⬚}\]
\end{document}
```
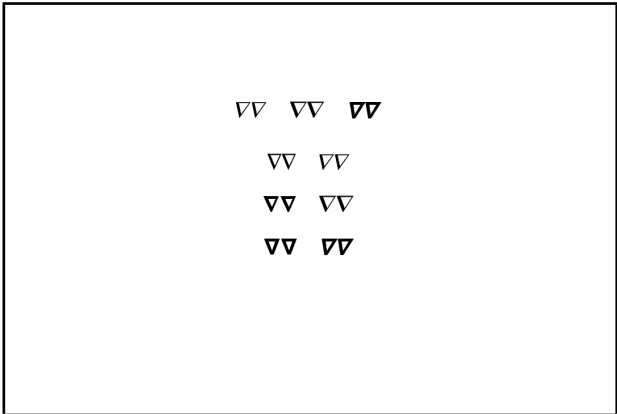
43 Test 031a

```
\input{umtest-preamble}
\usepackage[nabla=upright] {unicode-math}
\setmathfont{Free Serif}
\begin{document}
\[⬚⬚ \quad ⬚⬚ \quad ⬚⬚\]
\[\mathup{⬚⬚} \quad \mathit{⬚⬚}\]
\[\mathbfup{⬚⬚} \quad \mathbfit{⬚⬚}\]
\[\mathbfsfup{⬚⬚} \quad \mathbfsfit{⬚⬚}\]
\end{document}
```

44 Test 031b

```
\input{umtest-preamble}
\usepackage[nabla=italic] {unicode-math}
\setmathfont{Free Serif}
\begin{document}
\[⬚⬚ \quad ⬚⬚ \quad ⬚⬚\]
\[\mathup{⬚⬚} \quad \mathit{⬚⬚}\]
\[\mathbfup{⬚⬚} \quad \mathbfit{⬚⬚}\]
\[\mathbfsfup{⬚⬚} \quad \mathbfsfit{⬚⬚}\]
\end{document}
```

45   Test 032a

```
\input{umtest-preamble}
\usepackage[partial=upright]{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[∂⬚ \quad ⬚⬚ \quad ⬚⬚\]
\[\mathup{∂⬚} \quad \mathit{∂⬚}\]
\[\mathbfup{∂⬚} \quad \mathbfit{∂⬚}\]
\[\mathbfsfup{∂⬚} \quad  \mathbfsfit{∂⬚}\]
\end{document}
```

$$\partial\partial \quad \partial\partial \quad \pmb{\partial\partial}$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\pmb{\partial\partial} \quad \pmb{\partial\partial}$$

46   Test 032b

```
\input{umtest-preamble}
\usepackage[partial=italic]{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[∂⬚ \quad ⬚⬚ \quad ⬚⬚\]
\[\mathup{∂⬚} \quad \mathit{∂⬚}\]
\[\mathbfup{∂⬚} \quad \mathbfit{∂⬚}\]
\[\mathbfsfup{∂⬚} \quad  \mathbfsfit{∂⬚}\]
\end{document}
```

$$\partial\partial \quad \partial\partial \quad \pmb{\partial\partial}$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\pmb{\partial\partial} \quad \pmb{\partial\partial}$$

47   Test 100a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left( \left( \left( \left( \left( \left( x
    \right)^2 \right)^2 \right)^2 \right)^2 \right
\end{document}
```

$$\left(\left(\left(\left(\left(\left(x^2\right)^2\right)^2\right)^2\right)^2\right)^2\right)$$

48 Test 100b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left[ \left[ \left[ \left[ \left[ \left[ x
    \right]^2 \right]^2 \right]^2 \right]^2 \r
\end{document}
```

$$\left[\left[\left[\left[\left[\left[x^2\right]^2\right]^2\right]^2\right]^2\right]^2\right]$$

49 Test 100c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left\{ \left\{ \left\{ \left\{ \left\{ \le
    \right\}^2 \right\}^2 \right\}^2 \right\}^
\end{document}
```

$$\left\{\left\{\left\{\left\{\left\{\left\{x^2\right\}^2\right\}^2\right\}^2\right\}^2\right\}^2\right\}$$

50 Test 100d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left| \left| \left| \left| \left| \left| x
    \right|^2 \right|^2 \right|^2 \right|^2 \r

\[ \left\vert \left\vert \left\vert \left\vert
    \right\vert^2 \right\vert^2 \right\vert^2
\end{document}
```

$$\left|\left|\left|\left|\left|\left|x^2\right|^2\right|^2\right|^2\right|^2\right|^2\right|$$

$$\left\vert\left\vert\left\vert\left\vert\left\vert\left\vert x^2\right\vert^2\right\vert^2\right\vert^2\right\vert^2\right\vert^2\right\vert$$

51 Test 100e

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left⫾ \left⫾ \left⫾ \left⫾ \left⫾ \left⫾ x
    \right⫾^2 \right⫾^2 \right⫾^2 \right⫾^2 \r
```

```
\[ \left\Vert \left\Vert \left\Vert \left\Ver
    \right\Vert^2 \right\Vert^2 \right\Vert^2
\end{document}
```

$$\left\|\left\|\left\|\left\|\left\|\left\|x^2\right\|^2\right\|^2\right\|^2\right\|^2\right\|^2\right\|$$

$$\left\|\left\|\left\|\left\|\left\|\left\|x^2\right\|^2\right\|^2\right\|^2\right\|^2\right\|^2\right\|$$

52 Test 101a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ a>b \quad c<d \]
\[ \left< \left< \left< \left< x \right>^2
    \right>^2 \right>^2 \right>^2 \]
\end{document}
```

$$a > b \quad c < d$$

$$\left\langle\left\langle\left\langle\left\langle x\right\rangle^2\right\rangle^2\right\rangle^2\right\rangle^2$$

53 Test 102a

```
\input{umtest-preamble}
\usepackage[slash-delimiter=frac]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \left.\left[\begin{array}{cc}
    a & b \\ c & d
   \end{array}\right]
   \middle/
   \left[\begin{array}{cc}
    1 & 1 \\ 1 & 0
   \end{array}\right]\right.
\]
\end{document}
```

$$\left.\left[\begin{array}{cc} a & b \\ c & d \end{array}\right]\middle/\left[\begin{array}{cc} 1 & 1 \\ 1 & 0 \end{array}\right]\right.$$

54 Test 150a

```
\input{umtest-preamble}
\usepackage{amsmath,unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\centerline{$\int\quad\idotsint$}
\[\int\quad\idotsint\]
\end{document}
```

$$\int \quad \int \cdots \int$$

$$\int \quad \int \cdots \int$$

55 Test 151a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \hat i \qquad \hat x \qquad \hat M \qquad \
\[ \widehat i \qquad \widehat x \qquad \wideha
\[ \tilde i \qquad \tilde x \qquad \tilde M \q
\[ \widetilde i \qquad \widetilde x \qquad \wi
\end{document}
```

$$\hat{i} \qquad \hat{x} \qquad \widehat{M} \qquad \widehat{x+y}$$
$$\hat{i} \qquad \hat{x} \qquad \widehat{M} \qquad \widehat{x+y}$$
$$\tilde{i} \qquad \tilde{x} \qquad \widetilde{M} \qquad \widetilde{x+y}$$
$$\tilde{i} \qquad \tilde{x} \qquad \widetilde{M} \qquad \widetilde{x+y}$$

56 Test 200a

```
\input{umtest-preamble}
\usepackage{amsmath,unicode-math}
\setmathfont{Cambria Math}
\begin{document}
  [${x\prime\prime\prime}$]
  [${x\prime\prime\prime\prime\prime\prime}$]
  [${x'}$]
  [${x''}$]
  [${x''''''}$]
  [${x⍰}$]
  [${x⍰⍰⍰}$]
  [${x⍰⍰'⍰\prime⍰}$]
\end{document}
```

$$[x'''] \ [x''''''] \ [x'] \ [x'''] \ [x''''''] \ [x'] \ [x'''] \ [x'''''']$$

57 Test 201a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \sqrt{\sin^{2}x+\cos^{2}x}=1  \]
\[ \sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+x}}}}\]
\end{document}
```

$$\sqrt{\sin^2 x + \cos^2 x} = 1$$

$$\sqrt{1 + \sqrt{1 + \sqrt{1 + \sqrt{1 + x}}}}$$

58 Test 202a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[a\colon b\qquad a: b
  \qquad a^^^^2236 b\]
\end{document}
```

$$a{:}b \qquad a : b \qquad a : b$$

59 Test 202b

```
\input{umtest-preamble}
\usepackage[colon=literal]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[a\colon b\qquad a: b
  \qquad a^^^^2236 b\]
\end{document}
```

$$a{:}b \qquad a{:}b \qquad a : b$$

60 Test 203a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[a-b\]
\[a\minus b\]
\end{document}
```

$$a - b$$

$$a - b$$

61 Test 204a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\setlength\parskip{12pt}
\begin{document}
$x_{012}$ $x_{123}$ $x_{234}$ $x_{345}$ $x_{456}$ $x_{567}$ $x_6

$x_{9+-}$ $x_{+-(}$ $x_{-(=}$ $x_{(=)}$ $x_{=)▯}$ $x_{)▯▯}$ $x▯▯

$x^{0▯+)▯2}$ $x^{▯+)▯2}$ $x^{▯2}$ $x^{2▯+)▯}$

$x_{34}^{2▯+)▯}$
\end{document}
```

$$x_{012} \; x_{123} \; x_{234} \; x_{345} \; x_{456} \; x_{567} \; x_{678} \; x_{789} \; x_{89+}$$

$$x_{9+-} \; x_{+-(} \; x_{-(=} \; x_{(=)} \; x_{=)a} \; x_{)ae} \; x_{aeo} \; x_{eox} \; x_{ox0} \; x_{x01}$$

$$x^{0i+)n2} \; x^{i+)n2} \; x^{n2} \; x^{2i+)n}$$

$$x_{34}^{2i+)n}$$

62 Test 205a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\iiint_V\]
\removenolimits\iiint
\[\iiint_V\]
\addnolimits\iiint
\[\iiint_V\]
\end{document}
```

$$\iiint_V$$

$$\iiint_V$$

$$\iiint_V$$

63   Test 500a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont[Colour=000000]{Cambria Math}
\setmathfont[Range={\mathop}, Colour=FF0000]{
\setmathfont[Range={\equal}, Colour=009900]{C
\setmathfont[Range={\mathopen,\mathclose},
        Colour=0000FF]{Cambria Math}
\setlength\parskip{12pt}
\begin{document}
\[
  F(s)=\mathscr{L}\left\{f(t)\right\}=
    \int_0^\infty \mathup{e}^{-st}f(t)\,\math
\]
\end{document}
```

$$F(s) = \mathcal{L}\{f(t)\} = \int_0^\infty \mathrm{e}^{-st} f(t)\,\mathrm{d}t$$