The unicode-math test suite

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Compiled: October 11, 2009

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 001e

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

6   Test 002a

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱστυφϕχψω

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7   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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8   Test 002c

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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αβγδεεζηθϑικκλμνξοπϖρϱστυφϕχψω

9 Test 002d

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθθικϰλμνξοπϖρρςστυφφχψω

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αβγδεεζηθθικϰλμνξοπϖρρςστυφφχψω

10 Test 002e

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθθικϰλμνξοπϖρρςστυφφχψω

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθθικϰλμνξοπϖρρςστυφφχψω

11 Test 004a

```
\input{umtest-preamble}
\usepackage[sans-style=upright]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathsfup\]
\[\LATINmathsfit\]
\[\latinmathsfup\]
\[\latinmathsfit\]
\[\numbersmathsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

12   Test 004b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

13   Test 004c

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathsfup\]
\[\LATINmathsfit\]
\[\latinmathsfup\]
\[\latinmathsfit\]
\[\numbersmathsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

14   Test 004d

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

15 Test 004e

```
\input{umtest-preamble}
\usepackage[sans-style=literal]{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\LATINmathsfup\]
\[\LATINmathsfit\]
\[\latinmathsfup\]
\[\latinmathsfit\]
\[\numbersmathsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

16 Test 004f

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

17 Test 005a

```
\input{umtest-preamble}
\usepackage[sans-style=upright]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\LATINmathbfsfup\]
\[\LATINmathbfsfit\]
\[\latinmathbfsfup\]
\[\latinmathbfsfit\]
\[\numbersmathbfsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

18 Test 005b

```
\input{umtest-preamble}
\usepackage[sans-style=upright]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\GREEKmathbfsfup\]
\[\GREEKmathbfsfit\]
\[\greekmathbfsfup\]
\[\greekmathbfsfit\]
\end{document}
```

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αβγδεϵζηθϑκϰλμνξοπϖρϱςστυφϑχψω

19 Test 005c

```
\input{umtest-preamble}
\usepackage[sans-style=upright]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\LATINmath\]
\[\mathbfsf\LATINtext\]
\[\mathbfsf\latinmath\]
\[\mathbfsf\latintext\]
\[\mathbfsf{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

20 Test 005d

```
\input{umtest-preamble}
\usepackage[sans-style=upright]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\GREEKmath\]
\[\mathbfsf\GREEKtext\]
\[\mathbfsf\greekmath\]
\[\mathbfsf\greektext\]
\end{document}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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αβγδεεζηθϑικϰλμνξοπϖρϱςστυφφχψω

21   Test 005e

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\LATINmathbfsfup\]
\[\LATINmathbfsfit\]
\[\latinmathbfsfup\]
\[\latinmathbfsfit\]
\[\numbersmathbfsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

22   Test 005f

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\GREEKmathbfsfup\]
\[\GREEKmathbfsfit\]
\[\greekmathbfsfup\]
\[\greekmathbfsfit\]
\end{document}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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αβγδεϵζηθϑικλμνξοπϖρϱςστυφϑχψω

23   Test 005g

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\LATINmath\]
\[\mathbfsf\LATINtext\]
\[\mathbfsf\latinmath\]
\[\mathbfsf\latintext\]
\[\mathbfsf{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

24 Test 005h

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\GREEKmath\]
\[\mathbfsf\GREEKtext\]
\[\mathbfsf\greekmath\]
\[\mathbfsf\greektext\]
\end{document}
```

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αβγδεεζηθθικιλμνξοπϖρρςστυφφχψω

αβγδεεζηθθικιλμνξοπϖρρςστυφφχψω

25 Test 005i

```
\input{umtest-preamble}
\usepackage[sans-style=literal]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\LATINmathbfsfup\]
\[\LATINmathbfsfit\]
\[\latinmathbfsfup\]
\[\latinmathbfsfit\]
\[\numbersmathbfsfup\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

26 Test 005j

```
\input{umtest-preamble}
\usepackage[sans-style=literal]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\LATINmath\]
\[\mathbfsf\LATINtext\]
\[\mathbfsf\latinmath\]
\[\mathbfsf\latintext\]
\[\mathbfsf{0123456789}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

0123456789

27 Test 005k

```
\input{umtest-preamble}
\usepackage[sans-style=literal]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\mathbfsf\GREEKmath\]
\[\mathbfsf\GREEKtext\]
\[\mathbfsf\greekmath\]
\[\mathbfsf\greektext\]
\end{document}
```

$$\mathit{ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ}$$

$$ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ$$

$$αβγδεεζηθϑικϰλμνξοπϖρϱστυφφχψω$$

$$αβγδεεζηθϑικϰλμνξοπϖρϱστυφφχψω$$

28 Test 010a

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

$$\mathscr{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$

$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$

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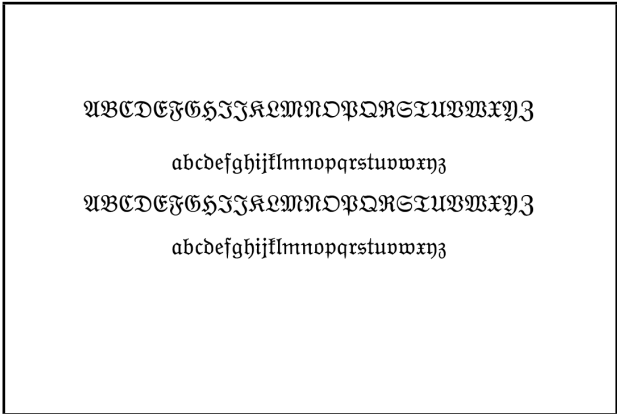
$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$

29 Test 010b

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

$$\mathscr{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$

$$\mathscr{abcdefghijklmnopqrstuvwxyz}$$
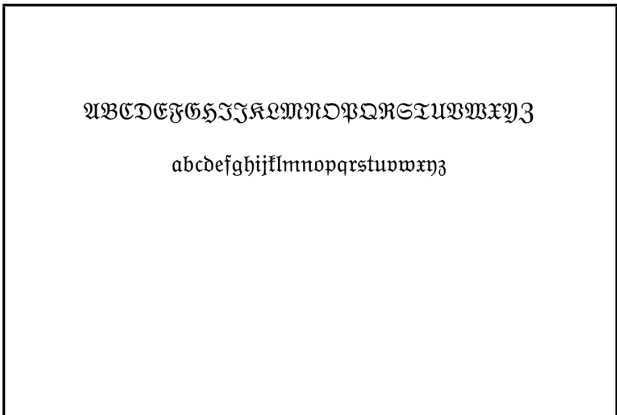
30 Test 010c

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


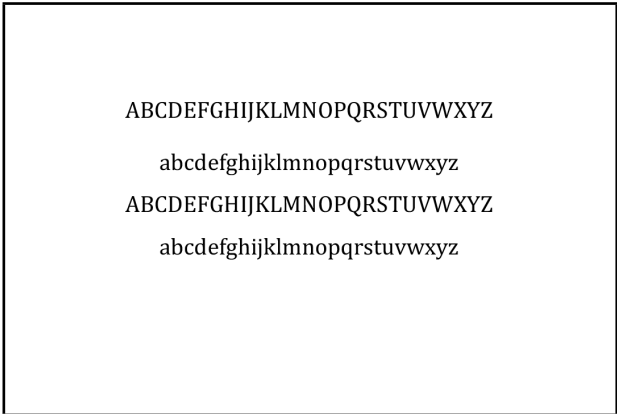## 31 Test 010d

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


32 Test 011a

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

33 Test 011b

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

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

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34 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

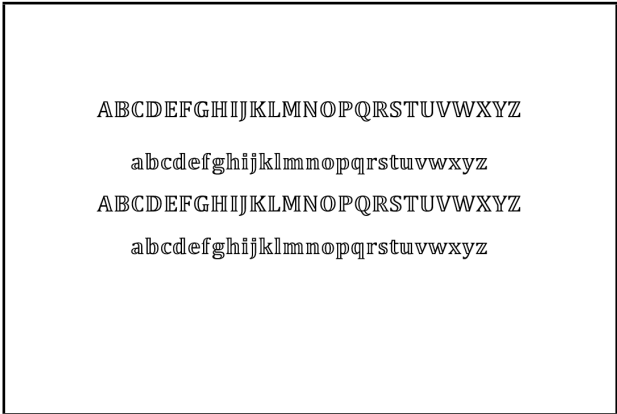*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

abcdefghijklmnopqrstuvwxyz

35 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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36 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
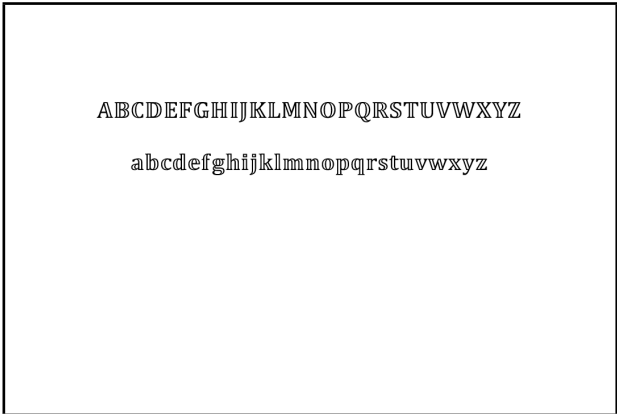
ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

37 Test 013b

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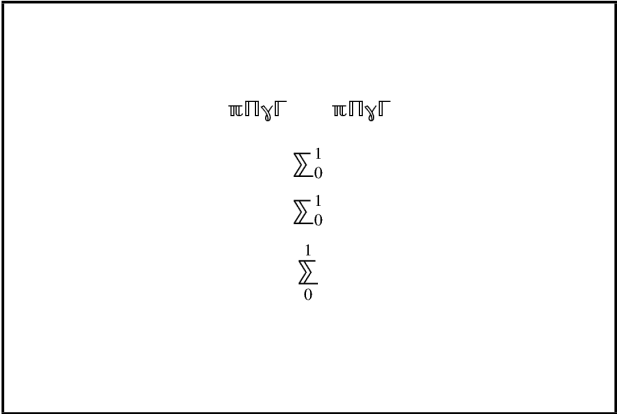
0123456789

0123456789

38 Test 013c

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

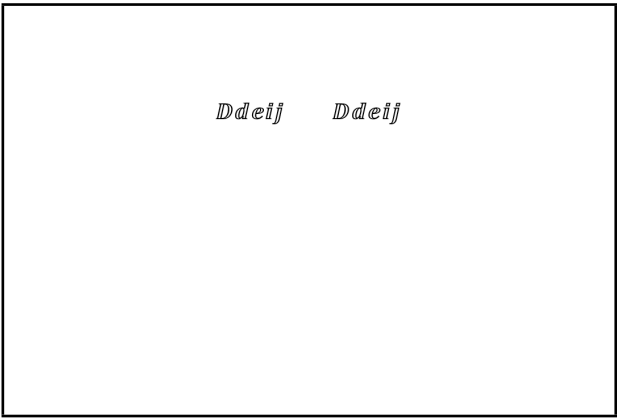ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

39   Test 013d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{STIXGeneral}
\begin{document}
\[ \mathbb{πΠγΓ} \qquad \mathbb{𝟙𝟚𝟛𝟜} \]
\[ \mathbb{\sum}_0^1 \]
\[ \mathbb{∑}_0^1 \]
\[ \Bbbsum_0^1 \]
\end{document}
```

$$\pi\Pi\gamma\Gamma \qquad \pi\Pi\gamma\Gamma$$
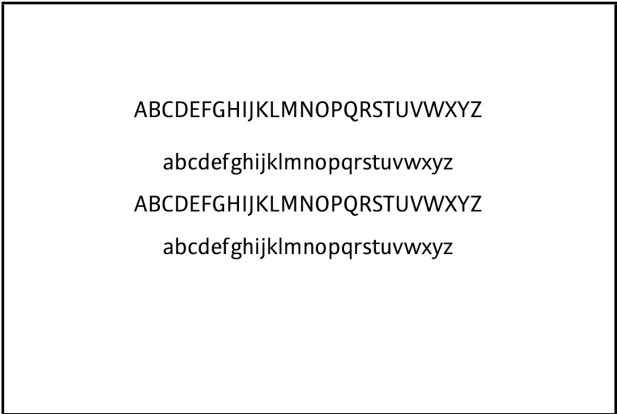
$$\sum_0^1$$

$$\sum_0^1$$

$$\sum_0^1$$

40   Test 013e

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

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

41   Test 014a

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

42 Test 014b

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

0123456789

0123456789

43 Test 014c

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

44 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

45 Test 015b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

46 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

47 Test 016b

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

0123456789

0123456789

48 Test 016c

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

49 Test 017a

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

𝓐𝓑𝓒𝓓𝓔𝓕𝓖𝓗𝓘𝓙𝓚𝓛𝓜𝓝𝓞𝓟𝓠𝓡𝓢𝓣𝓤𝓥𝓦𝓧𝓨𝓩

𝓪𝓫𝓬𝓭𝓮𝓯𝓰𝓱𝓲𝓳𝓴𝓵𝓶𝓷𝓸𝓹𝓺𝓻𝓼𝓽𝓾𝓿𝔀𝔁𝔂𝔃

𝓐𝓑𝓒𝓓𝓔𝓕𝓖𝓗𝓘𝓙𝓚𝓛𝓜𝓝𝓞𝓟𝓠𝓡𝓢𝓣𝓤𝓥𝓦𝓧𝓨𝓩

𝓪𝓫𝓬𝓭𝓮𝓯𝓰𝓱𝓲𝓳𝓴𝓵𝓶𝓷𝓸𝓹𝓺𝓻𝓼𝓽𝓾𝓿𝔀𝔁𝔂𝔃

50 Test 017b

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

𝓐𝓑𝓒𝓓𝓔𝓕𝓖𝓗𝓘𝓙𝓚𝓛𝓜𝓝𝓞𝓟𝓠𝓡𝓢𝓣𝓤𝓥𝓦𝓧𝓨𝓩

𝓪𝓫𝓬𝓭𝓮𝓯𝓰𝓱𝓲𝓳𝓴𝓵𝓶𝓷𝓸𝓹𝓺𝓻𝓼𝓽𝓾𝓿𝔀𝔁𝔂𝔃

51   Test 017c

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

𝕬𝕭𝕮𝕯𝕰𝕱𝕲𝕳𝕴𝕵𝕶𝕷𝕸𝕹𝕺𝕻𝕼𝕽𝕾𝕿𝖀𝖁𝖂𝖃𝖄𝖅

𝖆𝖇𝖈𝖉𝖊𝖋𝖌𝖍𝖎𝖏𝖐𝖑𝖒𝖓𝖔𝖕𝖖𝖗𝖘𝖙𝖚𝖛𝖜𝖝𝖞𝖟

𝕬𝕭𝕮𝕯𝕰𝕱𝕲𝕳𝕴𝕵𝕶𝕷𝕸𝕹𝕺𝕻𝕼𝕽𝕾𝕿𝖀𝖁𝖂𝖃𝖄𝖅

𝖆𝖇𝖈𝖉𝖊𝖋𝖌𝖍𝖎𝖏𝖐𝖑𝖒𝖓𝖔𝖕𝖖𝖗𝖘𝖙𝖚𝖛𝖜𝖝𝖞𝖟

52   Test 017d

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

𝕬𝕭𝕮𝕯𝕰𝕱𝕲𝕳𝕴𝕵𝕶𝕷𝕸𝕹𝕺𝕻𝕼𝕽𝕾𝕿𝖀𝖁𝖂𝖃𝖄𝖅

𝖆𝖇𝖈𝖉𝖊𝖋𝖌𝖍𝖎𝖏𝖐𝖑𝖒𝖓𝖔𝖕𝖖𝖗𝖘𝖙𝖚𝖛𝖜𝖝𝖞𝖟

53   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

54 Test 018b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

55 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

56 Test 019b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικϰλμνξοπϖρϱςστυφϕχψω

57 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

58 Test 020b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱςστυφφχψω

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρϱςστυφφχψω

59 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

60   Test 021b

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

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρςστυφφχψω

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθϑικκλμνξοπϖρςστυφφχψω

61   Test 030a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[⌷⌷\]
\[⌷⌷\]
\[\mathup{⌷⌷}\]
\[\mathbf{⌷⌷}\]
\end{document}
```

Fϝ

⌷⌷

Fϝ

⌷⌷

62   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}
```

∇∇ ∇∇ ∇∇

∇∇ *∇∇*

∇∇ *∇∇*

∇∇ **∇∇**

63 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}
```

$$\mathit{\nabla\nabla} \quad \mathit{\nabla\nabla} \quad \mathbf{\nabla\nabla}$$
$$\nabla\nabla \quad \nabla\nabla$$
$$\mathbf{\nabla\nabla} \quad \nabla\nabla$$
$$\mathbf{\nabla\nabla} \quad \mathbf{\nabla\nabla}$$

64 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}
```

$$\partial\partial \quad \partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$

65 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}
```

$$\partial\partial \quad \partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$
$$\partial\partial \quad \partial\partial$$

66 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 \r
\end{document}
```

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

67 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}
```

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

68 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}
```

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

69   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}
```

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

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

70   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\Vert
    \right\Vert^2 \right\Vert^2 \right\Vert^2
\end{document}
```

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

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

71   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}
```

$$a > b \quad c < d$$
$$\left\langle\left\langle\left\langle\left\langle x\right\rangle^2\right\rangle^2\right\rangle^2\right\rangle^2$$

72 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}
```

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

73 Test 150a

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

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

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

74 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}
```

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

75 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}
```

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

76 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}
```

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

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

77 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}
```

$$a : b \qquad a : b \qquad a : b$$

78 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}
```

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

79 Test 203a

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

$$a-b$$
$$a-b$$

80 Test 204a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\setlength\parskip{12pt}
\begin{document}
$x₀₁₂$ $x₁₂₃$ $x₂₃₄$ $x₃₄₅$ $x₄₅₆$ $x₅₆₇$ $x₆}

$x₉₊₋$ $x₊₋₍$ $x₋₍₌$ $x₍₌₎$ $x₌₎⬚$ $x₎⬚⬚$ $x⬚⬚

$xº⬚⁺⁾⬚²$ $x⬚⁺⁾⬚²$ $x⬚²$ $x²⬚⁺⁾⬚$

$x₃₄²⬚⁺⁾⬚$
\end{document}
```

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

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

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

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

81 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}
```


82 Test 500a

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


83 Test 501a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont[Colour=000000]{Cambria Math}
\setmathfont[range=\mathscr, Colour=FF0000]{C
\setmathfont[range=\mathfrak, Colour=0000FF]{
\begin{document}
\[\latintext\]
\[\mathscr{\latintext}\]
\[\mathfrak{\latintext}\]
\[\LATINmath\]
\[\mathscr{\LATINmath}\]
\[\mathfrak{\LATINmath}\]
\end{document}
```