The unicode-math test suite

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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

abcdef ghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

2 Test 001b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

3 Test 001c

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

4 Test 001d

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

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}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΎΦΧΨ Ω $\alpha \beta \gamma \delta \varepsilon \epsilon \zeta \eta \theta \vartheta \iota \kappa \kappa \lambda \mu \nu \xi o \pi \varpi \rho \varrho \zeta \sigma \tau \upsilon \phi \phi \chi \psi \omega$ $A B \Gamma \Delta E Z H Θ Θ I Κ Λ ΜΝΞΟΠΡΣΤΎΦ Χ Ψ Ω$

αβγδεεζηθθικκλμνξοπωροςστυφφχψω

7 Test 002b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωρρςςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωρρςςστυφφχψω

8 Test 002c

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

 $AB\Gamma\Delta EZH\Theta\Theta IK\Lambda MN\Xi O\Pi P\Sigma T\Upsilon\Phi X\Psi\Omega$

αβγδεεζηθθικκλμνξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω

9 Test 002d

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω

10 Test 002e

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω

11 Test 004a

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

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}
\[\mathsf{\LATINtext}\]
\[\mathsf{\LATINmath}\]
\[\mathsf{\latintext}\]
\[\mathsf{\latinmath}\]
\[\mathsf{\latinmath}\]
\[\mathsf{0123456789}\]
\end{document}
```

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}
\[\LATINmathbfsfup\]
\[\LATINmathbfsfit\]
\[\latinmathbfsfup\]
\[\latinmathbfsfit\]
\[\numbersmathbfsfit\]
\[\numbersmathbfsfup\]
\end{document}
```

18 Test 005b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγ∂εεζηθ9ικκλμνξοπωροςστυφ9χψω
αβγ∂εεζηθ9ικκλμνξοπωρρςστυφ9χψω

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}
\[\mathbfsf\GREEKmath\]
\[\mathbfsf\greekmath\]
\[\mathbfsf\greekmath\]
\[\mathbfsf\greektext\]
\end{document}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθ9ικικλμνξοπωροςστυφφχψω αβγδεεζηθ9ικικλμνξοπωροςστυφφχψω

21 Test 005e

```
\input{umtest-preamble}
\usepackage[sans-style=italic]{unicode-math}
\setmathfont{Code2001}
\begin{document}
\[\LATINmathbfsfup\]
\[\LATINmathbfsfit\]
\[\latinmathbfsfit\]
\[\latinmathbfsfit\]
\[\numbersmathbfsfup\]
\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
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγ∂εεζηθ9ικυλμνξοπωρρςστυφ9χψω
αβγ∂εεζηθ9ικυλμνξοπωρρςστυφ9χψω

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}
```

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}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγ∂εεζηθθικυλμνζοπωρρςστυφφχψω
αβγ∂εεζηθθικυλμνζοπωρρςστυφφχψω

25 Test 005i

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

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}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικιλμνξοπωροςστυφφχψω
αβγδεεζηθθικιλμνξοπωροςστυφφχψω

28 Test 010a

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

29 Test 010b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

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}

UBCDEFGHIJKUMNDPQRSTUBWXY3

abcdefghijkumopqrstuvwxy3

UBCDEFGHIJKUMNDPQRSTUBWXY3

abcdefghijkumopqrstuvwxy3

31 Test 010d

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

UBCDEFGHIJKLMNDHQRSTUBBXY3

abcdefghijklmnopqrstubbxy3

32 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

33 Test 011b

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

$AB\Gamma\Delta EZH\Theta\Theta IK\Lambda MN\Xi O\Pi P\Sigma T\Upsilon\Phi X\Psi\Omega$

αβγδεεζηθθικκλμνξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω

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

abcdef ghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdef ghijklmnopqrstuvwxyz

35 Test 012b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωρρςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωρρςστυφφχψω

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

```
\label{eq:linear_cont} $$\sup_{\alpha\in\mathbb{N}} \operatorname{document} \ \| \operatorname{docume
```

```
\begin{array}{ccc} \mathfrak{m}\mathfrak{n}\mathfrak{g}\mathfrak{l} & \mathfrak{m}\mathfrak{n}\mathfrak{g}\mathfrak{l} \\ & \overset{1}{\sum_{0}^{1}} \\ & \overset{1}{\sum_{0}^{1}} \end{array}
```

40 Test 013e

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

Ddeij 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}
\[\mathbffrak{\LATINtext}\]
\[\mathbffrak{\LATINmath}\]
\[\mathbffrak{\LATINmath}\]
\[\mathbffrak{\latinmath}\]
\end{document}

ABEDEFGHIJKEMNOPQRSTUBWXYZ

abcdefghijfImnopqrstubwxyz

ABEDEFGHIJKEMNOPQRSTUBWXYZ

abcdefghijfImnopqrstubwxyz

52 Test 017d

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

ABEDEFGHIJKUMNDHORSTUBWXYZ

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}
\[\mathbfup{\GREEKtext}\]
\[\mathbfup{\GREEKmath}\]
\[\mathbfup{\greekmath}\]
\end{document}

$A B \Gamma \Delta E Z H \Theta \Theta I K \Lambda M N \Xi O \Pi P \Sigma T \Upsilon \Phi X \Psi \Omega$ $\alpha \beta \gamma \delta \epsilon \epsilon \zeta \eta \theta \vartheta \iota \kappa \varkappa \lambda \mu \nu \xi o \pi \varpi \rho \varrho \varsigma \sigma \tau \upsilon \phi \varphi \chi \psi \omega$

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω

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}
\[\mathbfit{\GREEKtext}\]
\[\mathbfit{\GREEKmath}\]
\[\mathbfit{\GREEKmath}\]
\[\mathbfit{\greekmath}\]
\end{document}

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθθικκλμνξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθθικκλμνξοπωροςστυφφχψω

57 Test 020a

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

0123456789

58 Test 020b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεεζηθδικκλμυξοπωροςστυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθδικκλμυξοπωροςστυφφχψω

59 Test 021a

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

0123456789

60 Test 021b

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθδικκλμυξοπωρος στυφφχψω ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ αβγδεεζηθδικκλμυξοπωρος στυφφχψω

61 Test 030a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{FreeSerif}
\begin{document}
\[22\]
\[22\]
\[\mathup{22}\]
\[\mathbf{22}\]
\end{document}
```

Ff Ff Ff

62 Test 031a

```
\input{umtest-preamble}
\usepackage[nabla=upright] {unicode-math}
\setmathfont{Free Serif}
\begin{document}
\[22 \quad 22 \quad 22\]
\[\mathup{22} \quad \mathit{22}\]
\[\mathbfup{22} \quad \mathbfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]
\end{document}
```

 $\begin{array}{ccc} \nabla \nabla & \boldsymbol{\nabla} \boldsymbol{\nabla} & \boldsymbol{\nabla} \boldsymbol{\nabla} \\ \nabla \nabla & \nabla \nabla \\ \boldsymbol{\nabla} \boldsymbol{\nabla} & \nabla \nabla \\ \boldsymbol{\nabla} \boldsymbol{\nabla} & \boldsymbol{\nabla} \boldsymbol{\nabla} \end{array}$

63 Test 031b

\input{umtest-preamble}
\usepackage[nabla=italic] {unicode-math}
\setmathfont{Free Serif}
\begin{document}
\[22 \quad 22 \quad 22\]
\[\mathup{22} \quad \mathit{22}\]
\[\mathbfup{22} \quad \mathbfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]
\[\mathbfsfup{22} \quad \mathbfsfit{22}\]

\(\nabla \nabla

64 Test 032a

\input{umtest-preamble}
\usepackage[partial=upright]{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[∂② \quad ②② \quad ②②\]
\[\mathup{∂②} \quad \mathit{∂②}\]
\[\mathbfup{∂②} \quad \mathbfit{∂②}\]
\[\mathbfsfup{∂②} \quad \mathbfsfit{∂②}\]
\end{document}

99 99 99 99 99 99 99

65 Test 032b

\input{umtest-preamble}
\usepackage[partial=italic]{unicode-math}
\setmathfont{Asana Math}
\begin{document}
\[\delta \quad \Delta \quad \Delta \]
\[\mathup{\delta \quad \mathbfit{\delta \P}\]
\[\mathbfup{\delta \quad \mathbfit{\delta \P}\]
\[\mathbfsfup{\delta \P} \quad \mathbfsfit{\delta \P} \]
\[\mathbfsfup{\delta \P} \quad \mathbfsfit{\delta \P} \]
\[\mathbfsfup{\delta \P} \quad \mathbfsfit{\delta \P} \quad \P\]
\[\mathbfsfup{\delta \P} \quad \P\

99 99 99 99 99 99 99 98 88

66 Test 100a

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

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

68 Test 100c

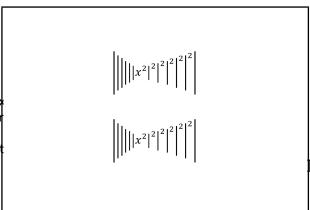
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\left\{ \left\{ \left\{ \left\{ \left\{ \left\\ \left\\}^2 \right\\}^2 \right\\}^2 \right\\}^2 \right\\}^2 \right\\}^

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

69 Test 100d

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

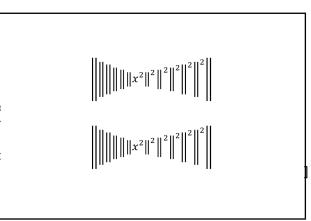
\[\left\vert \left\vert \left\vert
\right\vert^2 \right\vert^2 \right\vert^2
\end{document}



70 Test 100e

\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\left2 \left2 \left2 \left2 \left2 \right2^2 \right2^2

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



71 Test 101a

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

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

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

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

```
∫ ∫...∫
```

74 Test 151a

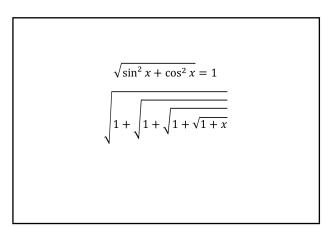
```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \hat i \qquad \hat x \qquad \hat M \qquad \
[ \widehat i \qquad \widehat x \qquad \widehat \
[ \tilde i \qquad \tilde x \qquad \tilde M \c\
\[ \widetilde i \qquad \widetilde x \qquad \wi\end{document}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

75 Test 200a

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



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 a:b 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 a:b 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}
\$x_{012}\$ \$x_{123}\$ \$x_{234}\$ \$x_{345}\$ \$x_{456}\$ \$x_{567}\$ \$x_{67}\$
\$x_{9+-}\$ \$x_{+-}(\$ \$x_{-}(\$ \$x_{-})\$ \$x_{-})2\$ \$x_{2}2\$ \$x_{2}2\$
\$x_{9+-}\$ \$x_{2}4\$ \$x_{2}4\$ \$x_{2}4\$
\$x_{2}4\$ \$x_{2}4\$ \$x_{2}5\$ \$x_{2}5\$ \$x_{2}5\$
\$x_{2}4\$ \$x_{2}5\$ \$x_{2}5\$
\$x_{2}5\$ \$x_{2}5\$ \$x_{2}5\$
\$x_{34}25^{2}5^{2}5\$
\end{document}

 $x_{012} \ x_{123} \ x_{234} \ x_{345} \ x_{456} \ x_{567} \ x_{678} \ x_{789} \ x_{89+}$ $x_{9+-} \ x_{+-(} \ x_{-(=} \ x_{(=)} \ x_{=)a} \ x_{)ae} \ x_{aeo} \ x_{eox} \ x_{ox0} \ x_{x01}$ $x^{0i+)n^2} \ x^{i+)n^2} \ x^{n^2} \ x^{2i+)n}$ $x_{34}^{2i+)n}$

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}

\iiint_{v} \iiint_{v}

82 Test 206a

\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[A+B+\dots+Z\]
\[(A+B+\dots)\]
\[(A+B+\cdots)\]
\end{document}

$A + B + \dots + Z$ $(A + B + \dots)$ $(A + B + \dots)$

83 Test 206b

\input{umtest-preamble}
\usepackage{amsmath}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[A+B+\dots+Z\]
\[(A+B+\dots)\]
\[(A+B+\cdots)\]
\end{document}

$$A + B + \dots + Z$$
$$(A + B + \dots)$$
$$(A + B + \dots)$$

84 Test 500a

```
F(s) = \mathcal{L}\{f(t)\} = \int_0^\infty e^{-st} f(t) dt
```

85 Test 501a

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopgrstuvwxyz
abcdefghijtlmnopgrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
UBCDEFGHJJKLMNOPQRSTUVWXYZ