

The unicode-math test suite

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Compiled: October 21, 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}  
\[ \text{LATINtext} \]  
\[ \text{latin} \]  
\[ \text{LATINmath} \]  
\[ \text{latin} \]  
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

2 Test 001b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

3 Test 001c

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

4 Test 001d

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

5 Test 001e

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

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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}
```

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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}
```

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9 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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10 Test 002e

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

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11 Test 004a

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
0123456789

13 Test 004c

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
0123456789

14 Test 004d

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

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}
```

ΑΒΓΔΕΖΗΘΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
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αβγδεεζηθθικιλμνξοπαρρεςστυφφχψω
αβγδεεζηθθικιλμνξοπαρρεςστυφφχψω

21 Test 005e

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
0123456789

22 Test 005f

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

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
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αβγδεεζηθθικιμνξοπωρρςστυφθχψω

23 Test 005g

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

ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
ΑΒΓΔΕΖΗΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεζηθικλμνξοπρρςστυφφχψω
αβγδεζηθικλμνξοπρρςστυφφχψω

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}
```

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αβγδεεζηθθικιμνξοπωρρςστυφφχψω
αβγδεεζηθθικιμνξοπωρρςστυφφχψω

28 Test 010a

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

ΑΒCDEFGH I J K L M N O P Q R S T U V W X Y Z
αβcdefgh i j k l m n o p q r s t u v w x y z
ΑΒCDEFGH I J K L M N O P Q R S T U V W X Y Z
αβcdefgh i j k l m n o p q r s t u v w x y z

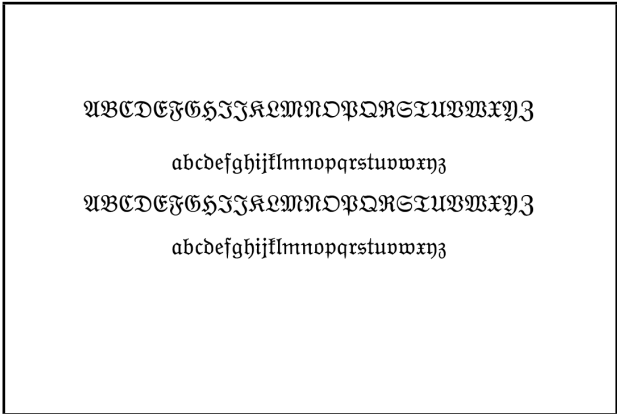
29 Test 010b

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

ΑΒCDEFGH I J K L M N O P Q R S T U V W X Y Z
αβcdefgh i j k l m n o p q r s t u v w x y z

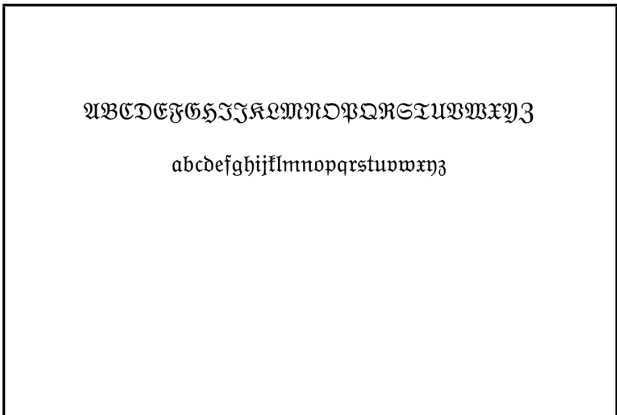
30 Test 010c

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



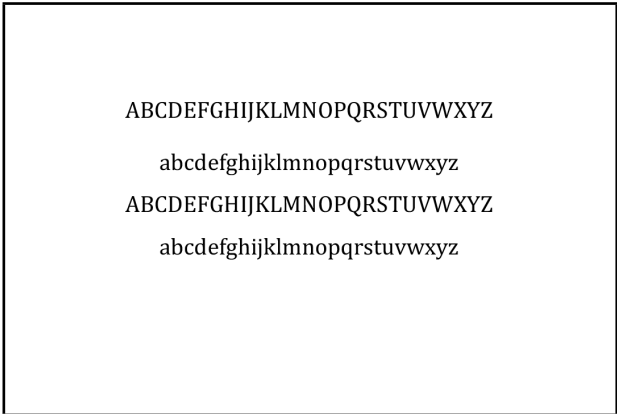
31 Test 010d

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



32 Test 011a

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

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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}
```

ΑΒΓΔΕΖΗΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
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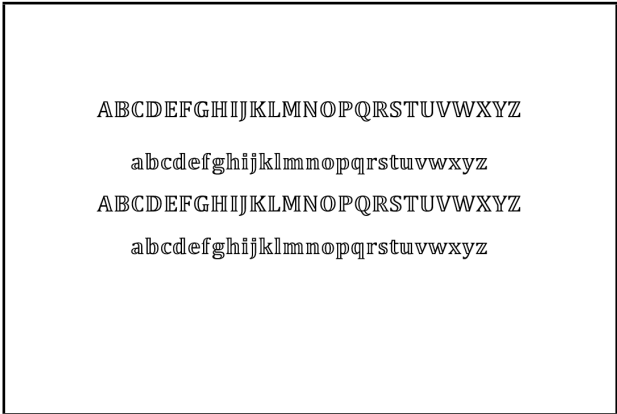
35 Test 012b

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

ΑΒΓΔΕΖΗΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεζηθικλμνξοπρρςστυφφχψω
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36 Test 013a

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



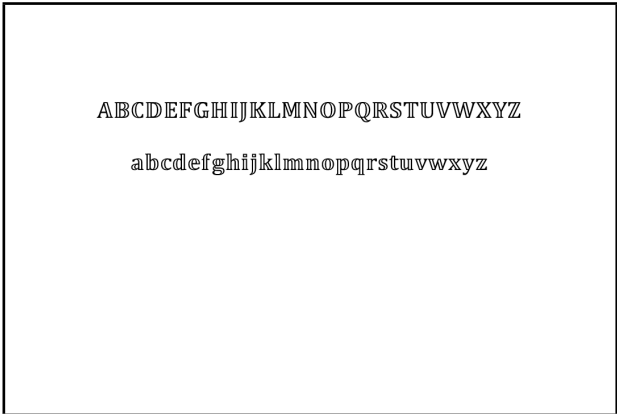
37 Test 013b

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



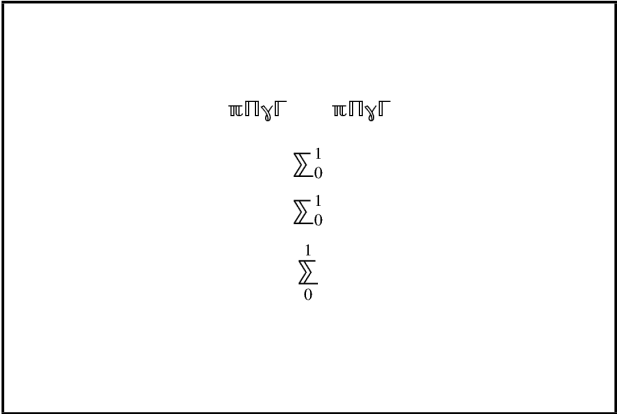
38 Test 013c

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



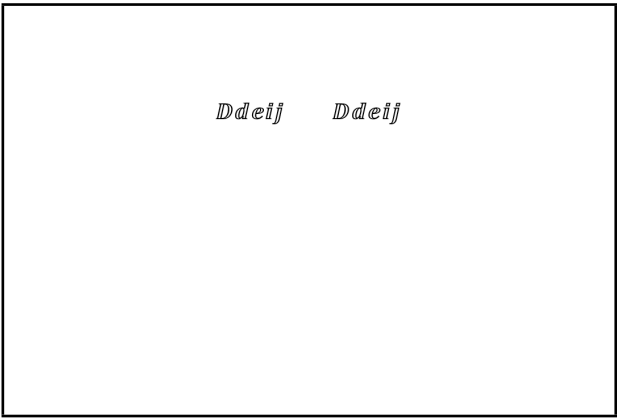
39 Test 013d

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{STIXGeneral}
\begin{document}
\[\ \mathbb{\pi\Gamma}\ \qquad \mathbb{\pi\Gamma}\ ]
\[\ \mathbb{\sum}_0^1\ ]
\[\ \mathbb{\Sigma}_0^1\ ]
\[\ \mathbb{\Sigma}_0^1\ ]
\end{document}
```



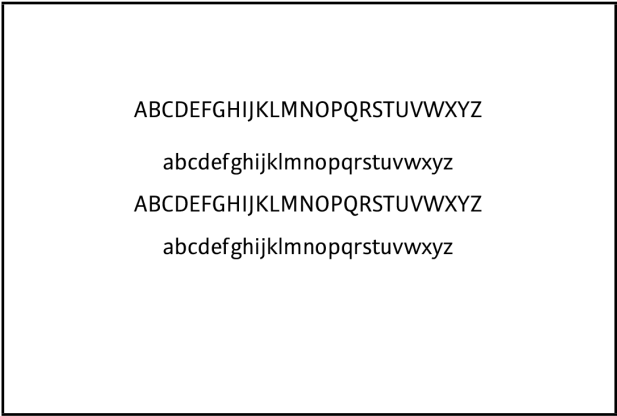
40 Test 013e

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



41 Test 014a

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



42 Test 014b

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

46 Test 016a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Asana Math}
\begin{document}
[\mathhtt{\backslash LATINtext}\backslash]
[\mathhtt{\backslash latinintext}\backslash]
[\mathhtt{\backslash LATINmath}\backslash]
[\mathhtt{\backslash latininmath}\backslash]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

47 Test 016b

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Asana Math}
\begin{document}

$$[0123456789]$$


$$[\text{numbers}0123456789]$$

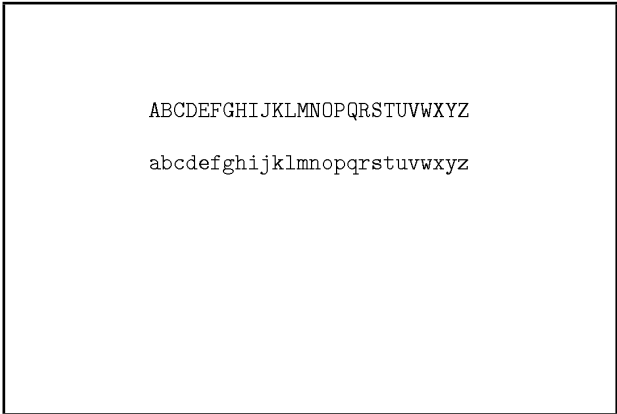
\end{document}
```

0123456789

0123456789

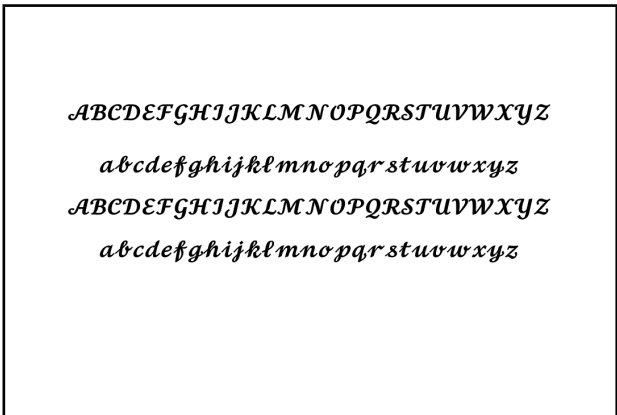
48 Test 016c

```
\input{umtest-preamble}  
\usepackage{unicode-math}  
\setmathfont{Asana Math}  
\begin{document}  
\[ \mathrm{ABCDEFGHIJKLMNOPQRSTUVWXYZ} \]  
\[ \mathrm{abcdefghijklmnopqrstuvwxyz} \]  
\end{document}
```



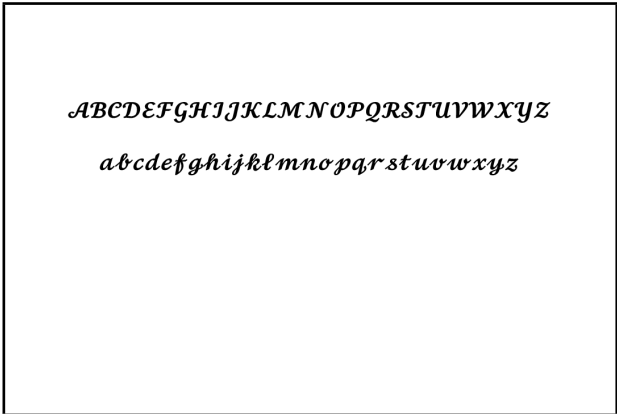
49 Test 017a

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



50 Test 017b

```
\input{umtest-preamble}  
\usepackage{unicode-math}  
\setmathfont{Cambria Math}  
\begin{document}  
\[ \mathrm{ABCDEFGHIJKLMNOPQRSTUVWXYZ} \]  
\[ \mathrm{abcdefghijklmnopqrstuvwxyz} \]  
\end{document}
```



51 Test 017c

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbf{\frac{\text{LATINtext}}{\text{LATINtext}}}\]
\[\mathbf{\frac{\text{LATINmath}}{\text{LATINmath}}}\]
\end{document}
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

52 Test 017d

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

53 Test 018a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[\mathbf{\frac{\text{LATINtext}}{\text{LATINtext}}}\]
\[\mathbf{\frac{\text{LATINmath}}{\text{LATINmath}}}\]
\[\mathbf{\frac{\text{LATINmath}}{\text{LATINmath}}}\]
\[\mathbf{\frac{\text{LATINmath}}{\text{LATINmath}}}\]
\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}
```

ΑΒΓΔΕΖΗΘΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπωρρςστυφφχψω
ΑΒΓΔΕΖΗΘΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπωρρςστυφφχψω

55 Test 019a

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

ΑΒΓΔΕΖΗΘΙΚΛΜΝΟΠΡΣΤΥΨΧΖ
abcdefghijklmnopqrstuvwxyz
ΑΒΓΔΕΖΗΘΙΚΛΜΝΟΠΡΣΤΥΨΧΖ
abcdefghijklmnopqrstuvwxyz
0123456789

56 Test 019b

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

ΑΒΓΔΕΖΗΘΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπωρρςστυφφχψω
ΑΒΓΔΕΖΗΘΘΙΚΑΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπωρρςστυφφχψω

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

abcdefghijklmnopqrstuvwxy

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxy

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

αβγδεζηθδικκλμνξοπρρςστυφχψω

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ

αβγδεζηθδικκλμνξοπρρςστυφχψω

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

abcdefghijklmnopqrstuvwxy

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxy

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}
```

ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπρρςστυφφχψω
ΑΒΓΔΕΖΗΘΘΙΚΛΜΝΞΟΠΡΣΤΥΦΧΨΩ
αβγδεεζηθθικκλμνξοπρρςστυφφχψω

61 Test 030a

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

\mathbb{F}
 $\mathbf{\mathbb{F}}$
 \mathbb{F}
 $\mathbf{\mathbb{F}}$

62 Test 031a

```
\input{umtest-preamble}
\usepackage[nabla=upright]{unicode-math}
\setmathfont{Free Serif}
\begin{document}
\[\mathup{\mathbb{N}} \quad \mathit{\mathbb{N}} \quad \mathbf{\mathbb{N}}\]
\[\mathbfup{\mathbb{N}} \quad \mathbfbf{\mathbb{N}}\]
\[\mathbfbfup{\mathbb{N}} \quad \mathbfbfbf{\mathbb{N}}\]
\end{document}
```

\mathbb{N} \mathbb{N} \mathbb{N}
 \mathbb{N} \mathbb{N}
 \mathbb{N} \mathbb{N}
 \mathbb{N} \mathbb{N}

63 Test 031b

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

$\nabla \quad \nabla \quad \nabla$
 $\mathup{\nabla} \quad \mathit{\nabla}$
 $\mathbfup{\nabla} \quad \mathbfit{\nabla}$
 $\mathbfsfup{\nabla} \quad \mathbfsfit{\nabla}$

64 Test 032a

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

$\partial \quad \partial \quad \partial$
 $\mathup{\partial} \quad \mathit{\partial}$
 $\mathbfup{\partial} \quad \mathbfit{\partial}$
 $\mathbfsfup{\partial} \quad \mathbfsfit{\partial}$

65 Test 032b

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

$\partial \quad \partial \quad \partial$
 $\mathup{\partial} \quad \mathit{\partial}$
 $\mathbfup{\partial} \quad \mathbfit{\partial}$
 $\mathbfsfup{\partial} \quad \mathbfsfit{\partial}$

66 Test 100a

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

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

67 Test 100b

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

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

68 Test 100c

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

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

69 Test 100d

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

[illegible]

70 Test 100e

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

[illegible]

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}
```

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

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

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]\right/\left[\begin{array}{cc}
1 & 1 \\
1 & 0
\end{array}\right]
\end{array}\right]
\end{document}
```

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

73 Test 150a

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

$$\int\!\!\!\int\!\!\!\int$$

74 Test 151a

```
\input{umtest-preamble}
\usepackage{unicode-math}
\setmathfont{Cambria Math}
\begin{document}
\[ \hat{i} \quad \hat{x} \quad \hat{M} \quad \widehat{x+y}
\]
\[ \tilde{i} \quad \tilde{x} \quad \tilde{M} \quad \widetilde{x+y}
\]
\end{document}
```

$$\begin{array}{cccc} \hat{i} & \hat{x} & \hat{M} & \widehat{x+y} \\ \tilde{i} & \tilde{x} & \tilde{M} & \widetilde{x+y} \end{array}$$

75 Test 200a

```
\input{umtest-preamble}
\usepackage{amsmath,unicode-math}
\setmathfont{Cambria Math}
\begin{document}
  [${x\prime\prime\prime}$]
  [${x\prime\prime\prime\prime\prime\prime\prime\prime}$]
  [${x'}$]
  [${x'''}$]
  [${x''''''}$]
  [${x'}$]
  [${x'''}$]
  [${x''''''}$]
  [${x\text{}}$]
  [${x\text{}}\text{}}$]
  [${x\text{}}'\text{}}\prime\text{}}$]
\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\qqquad a: b]
  \qqquad a^{^^^2236} b\]
\end{document}
```

$$a:b \quad a: b \quad a: b$$

78 Test 202b

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

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

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}
 $x_{012} x_{123} x_{234} x_{345} x_{456} x_{567} x_{678} x_{789} x_{89+}$ 
 $x_{9+-} x_{+-(} x_{-(= } x_{(=) } x_{=)a} x_{)ae} x_{aeo} x_{eox} x_{ox0} x_{x01}$ 
 $x^{0i+)n2} x^{i+)n2} x^{n2} x^{2i+)n}$ 
 $x_{34}^{2i+)n}$ 
 $x^{0\text{)}\text{)}^2} x^{x\text{)}\text{)}^2} x^{x^2} x^{2\text{)}\text{)}^2}$ 
 $x_{34}^{2\text{)}\text{)}^2}$ 
\end{document}
```

$$x_{012} x_{123} x_{234} x_{345} x_{456} x_{567} x_{678} x_{789} x_{89+}$$
$$x_{9+-} x_{+-(} x_{-(= } x_{(=) } x_{=)a} x_{)ae} x_{aeo} x_{eox} x_{ox0} x_{x01}$$
$$x^{0i+)n2} x^{i+)n2} x^{n2} x^{2i+)n}$$
$$x_{34}^{2i+)n}$$

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}
```

$$\iiint_V$$
$$\iiint_V$$
$$\iiint_V$$

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}
```

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

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}
```

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

84 Test 500a

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

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

85 Test 501a

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

abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ