Default options

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1234	1234
`$12345$`	12345	12345	12345
`$123456$`	123456	123456	123456
`$1234567$`	1234567	1234567	1234567
	point		
`$.1$`	.1	.1	.1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1.1	1.1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1.2	1.2
`$1.23456$`	1.23456	1.23456	1.23456
`$12345.6$`	12345.6	12345.6	12345.6
`$1.23.456$`	1.23.456	1.23.456	1.23.456
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a.1$	$a.1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	, 1	, 1	, 1
`$1,$`	1,	1,	1,
`$1,1$`	1, 1	1, 1	1, 1
`$1, 2$`	1, 2	1, 2	1, 2
`$1 ,2$`	1, 2	1, 2	1, 2
`$1,23456$`	1, 23456	1, 23456	1, 23456
`$12345,6$`	12345, 6	12345, 6	12345, 6
`$1,23,456$`	1, 23, 456	1, 23, 456	1, 23, 456
`$a,b$`	a, b	a, b	a, b
`$a,1$`	$a, 1$	$a, 1$	$a, 1$
`$1,a$`	$1, a$	$1, a$	$1, a$

input	LaTeX	ionumbers	expected
	plus and minus		
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
	letter 'e'		
`$1e1234$`	$1e1234$	$1e1234$	$1e1234$
`$1e+1234$`	$1e+1234$	$1e+1234$	$1e+1234$
`$1e.$`	$1e.$	$1e.$	$1e.$
`$1e,$`	$1e,$	$1e,$	$1e,$
`$1e.1234$`	$1e.1234$	$1e.1234$	$1e.1234$
`$1e,1234$`	$1e,1234$	$1e,1234$	$1e,1234$
`$1e++1234$`	$1e++1234$	$1e++1234$	$1e++1234$
`$1e 1234$`	$1e1234$	$1e1234$	$1e1234$
`$1e +1234$`	$1e+1234$	$1e+1234$	$1e+1234$
`$1 e1234$`	$1e1234$	$1e1234$	$1e1234$
	mixed numbers		
`$1.234,890$`	$1.234,890$	$1.234,890$	$1.234,890$
`$1,234.890$`	$1,234.890$	$1,234.890$	$1,234.890$
`$1234e5678$`	$1234e5678$	$1234e5678$	$1234e5678$
`$+1234e5678$`	$+1234e5678$	$+1234e5678$	$+1234e5678$
`$1234e+5678$`	$1234e+5678$	$1234e+5678$	$1234e+5678$
`$1.234e5.678$`	$1.234e5.678$	$1.234e5.678$	$1.234e5.678$
`$1,234e5,678$`	$1,234e5,678$	$1,234e5,678$	$1,234e5,678$
	single characters		
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}234$	$\sqrt{1}234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1234$	$\sqrt{+}1234$
`$1e\sqrt +1234$`	$1e\sqrt{+}1234$	$1e\sqrt{+}1234$	$1e\sqrt{+}1234$
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1234e0$	$1\sqrt{+}1234e0$

Options `autothousands=true,autothousandths=true`

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1, 234	1, 234
`$12345$`	12345	12, 345	12, 345
`$123456$`	123456	123, 456	123, 456
`$1234567$`	1234567	1, 234, 567	1, 234, 567
	point		
`$.1$`	.1	.1	.1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1.1	1.1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1.2	1.2
`$1.23456$`	1.23456	1.234 56	1.234 56
`$12345.6$`	12345.6	12, 345.6	12, 345.6
`$1.23.456$`	1.23.456	1.23.4 56	1.23.4 56
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a.1$	$a.1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	, 1	, 1	, 1
`$1,$`	1,	1,	1,
`$1,1$`	1, 1	1, 1	1, 1
`$1, 2$`	1, 2	1, 2	1, 2
`$1 ,2$`	1, 2	1, 2	1, 2
`$1,23456$`	1, 23456	1, 23456	1, 23456
`$12345,6$`	12345, 6	12345, 6	12345, 6
`$1,23,456$`	1, 23, 456	1, 23, 456	1, 23, 456
`$a,b$`	a, b	a, b	a, b
`$a,1$`	$a, 1$	$a, 1$	$a, 1$
`$1,a$`	$1, a$	$1, a$	$1, a$

input	LaTeX	ionumbers	expected
		plus and minus	
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
		letter 'e'	
`$1e1234$`	$1e1234$	$1e1,234$	$1e1,234$
`$1e+1234$`	$1e+1234$	$1e+1,234$	$1e+1,234$
`$1e.$`	$1e.$	$1e.$	$1e.$
`$1e,$`	$1e,$	$1e,$	$1e,$
`$1e.1234$`	$1e.1234$	$1e.123\,4$	$1e.123\,4$
`$1e,1234$`	$1e,1234$	$1e,1234$	$1e,1234$
`$1e++1234$`	$1e++1234$	$1e++1,234$	$1e++1,234$
`$1e 1,234$`	$1e1,234$	$1e1,234$	$1e1,234$
`$1e +1234$`	$1e+1234$	$1e+1,234$	$1e+1,234$
`$1 e1,234$`	$1e1,234$	$1e1,234$	$1e1,234$
		mixed numbers	
`$1.234,890$`	$1.234,890$	$1.234,\ 890$	$1.234,\ 890$
`$1,234.890$`	$1,234.890$	$1,234.890$	$1,234.890$
`$1234e5678$`	$1234e5678$	$1,234e5,678$	$1,234e5,678$
`$+1234e5678$`	$+1234e5678$	$+1,234e5,678$	$+1,234e5,678$
`$1234e+5678$`	$1234e+5678$	$1,234e+5,678$	$1,234e+5,678$
`$1.234e5.678$`	$1.234e5.678$	$1.234e5.678$	$1.234e5.678$
`$1,234e5,678$`	$1,234e5,678$	$1,234e5,678$	$1,234e5,678$
		single characters	
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1},234$	$\sqrt{1},234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1,234$	$\sqrt{+}1,234$
`$1e\sqrt +1234$`	$1e\sqrt{+}1234$	$1e\sqrt{+}1,234$	$1e\sqrt{+}1,234$
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1,234e0$	$1\sqrt{+}1,234e0$

Options `autothousands=true,autothousandths=true, grplenthousands=2,grplenthousandths=4`

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	1,23	1,23
`$1234$`	1234	12,34	12,34
`$12345$`	12345	1,23,45	1,23,45
`$123456$`	123456	12,34,56	12,34,56
`$1234567$`	1234567	1,23,45,67	1,23,45,67
	point		
`$.1$`	.1	.1	.1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1.1	1.1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1.2	1.2
`$1.23456$`	1.23456	1.2345 6	1.2345 6
`$12345.6$`	12345.6	1,23,45.6	1,23,45.6
`$1.23.456$`	1.23.456	1.23.45 6	1.23.45 6
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a.1$	$a.1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	,1	,1	,1
`$1,$`	1,	1,	1,
`$1,1$`	1,1	1,1	1,1
`$1, 2$`	1,2	1,2	1,2
`$1 ,2$`	1,2	1,2	1,2
`$1,23456$`	1,23456	1,23456	1,23456
`$12345,6$`	12345,6	12345,6	12345,6
`$1,23,456$`	1,23,456	1,23,456	1,23,456
`$a,b$`	a,b	a,b	a,b
`$a,1$`	$a,1$	$a,1$	$a,1$
`$1,a$`	$1,a$	$1,a$	$1,a$

input	LaTeX	ionumbers	expected
	plus and minus		
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
	letter ‘e’		
`$1e1234$`	$1e1234$	$1e12,34$	$1e12,34$
`$1e+1234$`	$1e+1234$	$1e+12,34$	$1e+12,34$
`$1e.$`	$1e.$	$1e.$	$1e.$
`$1e,$`	$1e,$	$1e,$	$1e,$
`$1e.1234$`	$1e.1234$	$1e.1234$	$1e.1234$
`$1e,1234$`	$1e,1234$	$1e,1234$	$1e,1234$
`$1e++1234$`	$1e++1234$	$1e++12,34$	$1e++12,34$
`$1e 1,234$`	$1e1,234$	$1e1,234$	$1e1,234$
`$1e +1234$`	$1e+1234$	$1e+12,34$	$1e+12,34$
`$1 e1,234$`	$1e1,234$	$1e1,234$	$1e1,234$
	mixed numbers		
`$1.234,890$`	$1.234,890$	$1.234,8\,90$	$1.234,8\,90$
`$1,234.890$`	$1,234.890$	$1,234.890$	$1,234.890$
`$1234e5678$`	$1234e5678$	$12,34e56,78$	$12,34e56,78$
`$+1234e5678$`	$+1234e5678$	$+12,34e56,78$	$+12,34e56,78$
`$1234e+5678$`	$1234e+5678$	$12,34e+56,78$	$12,34e+56,78$
`$1.234e5.678$`	$1.234e5.678$	$1.234e5.678$	$1.234e5.678$
`$1,234e5,678$`	$1,234e5,678$	$1,234e5,678$	$1,234e5,678$
	single characters		
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}2,34$	$\sqrt{1}2,34$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}12,34$	$\sqrt{+}12,34$
`$1e\sqrt +1234$`	$1e\sqrt{+}1234$	$1e\sqrt{+}12,34$	$1e\sqrt{+}12,34$
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}12,34e0$	$1\sqrt{+}12,34e0$

Options exponent=rmE

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1234	1234
`$12345$`	12345	12345	12345
`$123456$`	123456	123456	123456
`$1234567$`	1234567	1234567	1234567
	point		
`$.1$`	.1	.1	.1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1.1	1.1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1.2	1.2
`$1.23456$`	1.23456	1.23456	1.23456
`$12345.6$`	12345.6	12345.6	12345.6
`$1.23.456$`	1.23.456	1.23.456	1.23.456
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a.1$	$a.1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	, 1	, 1	, 1
`$1,$`	1,	1,	1,
`$1,1$`	1, 1	1, 1	1, 1
`$1, 2$`	1, 2	1, 2	1, 2
`$1 ,2$`	1, 2	1, 2	1, 2
`$1,23456$`	1, 23456	1, 23456	1, 23456
`$12345,6$`	12345, 6	12345, 6	12345, 6
`$1,23,456$`	1, 23, 456	1, 23, 456	1, 23, 456
`$a,b$`	a, b	a, b	a, b
`$a,1$`	$a, 1$	$a, 1$	$a, 1$
`$1,a$`	$1, a$	$1, a$	$1, a$

input	LaTeX	ionumbers	expected
		plus and minus	
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
		letter 'e'	
`$1e1234$`	$1e1234$	1E1234	1E1234
`$1e+1234$`	$1e+1234$	1E+1234	1E+1234
`$1e.$`	$1e.$	1E.	1E.
`$1e,$`	$1e,$	1E,	1E,
`$1e.1234$`	$1e.1234$	1E.1234	1E.1234
`$1e,1234$`	$1e,1234$	1E,1234	1E,1234
`$1e++1234$`	$1e++1234$	1E++1234	1E++1234
`$1e 1234$`	$1e1234$	1E1234	1E1234
`$1e +1234$`	$1e+1234$	1E+1234	1E+1234
`$1 e1234$`	$1e1234$	$1e1234$	$1e1234$
		mixed numbers	
`$1.234,890$`	$1.234,890$	$1.234,890$	$1.234,890$
`$1,234.890$`	$1,234.890$	$1,234.890$	$1,234.890$
`$1234e5678$`	$1234e5678$	1234E5678	1234E5678
`$+1234e5678$`	$+1234e5678$	+1234E5678	+1234E5678
`$1234e+5678$`	$1234e+5678$	1234E+5678	1234E+5678
`$1.234e5.678$`	$1.234e5.678$	1.234E5.678	1.234E5.678
`$1,234e5,678$`	$1,234e5,678$	$1,234E5,678$	$1,234E5,678$
		single characters	
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}234$	$\sqrt{1}234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1234$	$\sqrt{+}1234$
`$fails$`	fails	fails	fails
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1234E0$	$1\sqrt{+}1234E0$

Options `exponent=timestento`

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1234	1234
`$12345$`	12345	12345	12345
`$123456$`	123456	123456	123456
`$1234567$`	1234567	1234567	1234567
	point		
`$.1$`	.1	.1	.1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1.1	1.1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1.2	1.2
`$1.23456$`	1.23456	1.23456	1.23456
`$12345.6$`	12345.6	12345.6	12345.6
`$1.23.456$`	1.23.456	1.23.456	1.23.456
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a.1$	$a.1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	, 1	, 1	, 1
`$1,$`	1,	1,	1,
`$1,1$`	1, 1	1, 1	1, 1
`$1, 2$`	1, 2	1, 2	1, 2
`$1 ,2$`	1, 2	1, 2	1, 2
`$1,23456$`	1, 23456	1, 23456	1, 23456
`$12345,6$`	12345, 6	12345, 6	12345, 6
`$1,23,456$`	1, 23, 456	1, 23, 456	1, 23, 456
`$a,b$`	a, b	a, b	a, b
`$a,1$`	$a, 1$	$a, 1$	$a, 1$
`$1,a$`	$1, a$	$1, a$	$1, a$

input	LaTeX	ionumbers	expected
	plus and minus		
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
	letter 'e'		
`$1e1234$`	$1e1234$	1×10^{1234}	1×10^{1234}
`$1e+1234$`	$1e+1234$	$1\times10^{+1234}$	$1\times10^{+1234}$
`$1e.$`	$1e.$	$1\times10.$	$1\times10.$
`$1e,$`	$1e,$	$1\times10,$	$1\times10,$
`$1e.1234$`	$1e.1234$	$1\times10^{.1234}$	$1\times10^{.1234}$
`$1e,1234$`	$1e,1234$	$1\times10^{,1234}$	$1\times10^{,1234}$
`$1e++1234$`	$1e++1234$	$1\times10^{++1234}$	$1\times10^{++1234}$
`$1e 1234$`	$1e1234$	1×10^{1234}	1×10^{1234}
`$1e +1234$`	$1e+1234$	$1\times10^{+1234}$	$1\times10^{+1234}$
`$1 e1234$`	$1e1234$	$1e1234$	$1e1234$
	mixed numbers		
`$1.234,890$`	$1.234,890$	$1.234,890$	$1.234,890$
`$1,234.890$`	$1,234.890$	$1,234.890$	$1,234.890$
`$1234e5678$`	$1234e5678$	1234×10^{5678}	1234×10^{5678}
`$+1234e5678$`	$+1234e5678$	$+1234\times10^{5678}$	$+1234\times10^{5678}$
`$1234e+5678$`	$1234e+5678$	$1234\times10^{+5678}$	$1234\times10^{+5678}$
`$1.234e5.678$`	$1.234e5.678$	$1.234\times10^{5.678}$	$1.234\times10^{5.678}$
`$1,234e5,678$`	$1,234e5,678$	$1,234\times10^{5,678}$	$1,234\times10^{5,678}$
	single characters		
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}234$	$\sqrt{1}234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1234$	$\sqrt{+}1234$
`$fails$`	fails	fails	fails
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1234\times10^{0}$	$1\sqrt{+}1234\times10^{0}$

Options `comma=decimal,point=thousands`

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1234	1234
`$12345$`	12345	12345	12345
`$123456$`	123456	123456	123456
`$1234567$`	1234567	1234567	1234567
	point		
`$.1$`	.1	,1	,1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1,1	1,1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1,2	1,2
`$1.23456$`	1.23456	1,23456	1,23456
`$12345.6$`	12345.6	12345,6	12345,6
`$1.23.456$`	1.23.456	1,23,456	1,23,456
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a,1$	$a,1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	,1	.1	.1
`$1,$`	1,	1,	1,
`$1,1$`	1,1	1.1	1.1
`$1, 2$`	1,2	1,2	1,2
`$1 ,2$`	1,2	1.2	1.2
`$1,23456$`	1,23456	1.23456	1.23456
`$12345,6$`	12345,6	12345.6	12345.6
`$1,23,456$`	1,23,456	1.23.456	1.23.456
`$a,b$`	a,b	a,b	a,b
`$a,1$`	$a,1$	$a.1$	$a.1$
`$1,a$`	$1,a$	$1,a$	$1,a$

input	LaTeX	ionumbers	expected
		plus and minus	
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
		letter 'e'	
`$1e1234$`	$1e1234$	$1e1234$	$1e1234$
`$1e+1234$`	$1e+1234$	$1e+1234$	$1e+1234$
`$1e.$`	$1e.$	$1e.$	$1e.$
`$1e,$`	$1e,$	$1e,$	$1e,$
`$1e.1234$`	$1e.1234$	$1e,1234$	$1e,1234$
`$1e,1234$`	$1e,1234$	$1e.1234$	$1e.1234$
`$1e++1234$`	$1e++1234$	$1e++1234$	$1e++1234$
`$1e 1234$`	$1e1234$	$1e1234$	$1e1234$
`$1e +1234$`	$1e+1234$	$1e+1234$	$1e+1234$
`$1 e1234$`	$1e1234$	$1e1234$	$1e1234$
		mixed numbers	
`$1.234,890$`	$1.234,890$	$1,234.890$	$1,234.890$
`$1,234.890$`	$1,234.890$	$1.234,890$	$1.234,890$
`$1234e5678$`	$1234e5678$	$1234e5678$	$1234e5678$
`$+1234e5678$`	$+1234e5678$	$+1234e5678$	$+1234e5678$
`$1234e+5678$`	$1234e+5678$	$1234e+5678$	$1234e+5678$
`$1.234e5.678$`	$1.234e5.678$	$1,234e5,678$	$1,234e5,678$
`$1,234e5,678$`	$1,234e5,678$	$1.234e5.678$	$1.234e5.678$
		single characters	
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}234$	$\sqrt{1}234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1234$	$\sqrt{+}1234$
`$1e\sqrt +1234$`	$1e\sqrt{+}1234$	$1e\sqrt{+}1234$	$1e\sqrt{+}1234$
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1234e0$	$1\sqrt{+}1234e0$

Options `comma=decimal,point=thousands, autothousands,autothousandths,thousands=apostrophe thousandths=phantom`

This is test output of the ionumbers LaTeX package. The default LaTeX output, the output with ionumbers package and the expected output with ionumbers package is given for different inputs. If the package ionumbers works correctly, the contents in the 'ionumbers' columns and the respective contents in the 'expected' columns must be identical. Note that a lot of input is nonsense and serves for testing purposes only.

input	LaTeX	ionumbers	expected
	simple digits		
`$1$`	1	1	1
`$12$`	12	12	12
`$123$`	123	123	123
`$1234$`	1234	1′234	1′234
`$12345$`	12345	12′345	12′345
`$123456$`	123456	123′456	123′456
`$1234567$`	1234567	1′234′567	1′234′567
	point		
`$.1$`	.1	′1	′1
`$1.$`	1.	1.	1.
`$1.1$`	1.1	1′1	1′1
`$1. 2$`	1.2	1.2	1.2
`$1 .2$`	1.2	1′2	1′2
`$1.23456$`	1.23456	1′23456	1′23456
`$12345.6$`	12345.6	12345′6	12345′6
`$1.23.456$`	1.23.456	1′23′456	1′23′456
`$a.b$`	$a.b$	$a.b$	$a.b$
`$a.1$`	$a.1$	$a'1$	$a'1$
`$1.a$`	$1.a$	$1.a$	$1.a$
	comma		
`$,1$`	, 1	.1	.1
`$1,$`	1,	1,	1,
`$1,1$`	1, 1	1.1	1.1
`$1, 2$`	1, 2	1, 2	1, 2
`$1 ,2$`	1, 2	1.2	1.2
`$1,23456$`	1, 23456	1.234 56	1.234 56
`$12345,6$`	12345, 6	12′345.6	12′345.6
`$1,23,456$`	1, 23, 456	1.23.4 56	1.23.4 56
`$a,b$`	a, b	a, b	a, b
`$a,1$`	a, 1	$a.1$	$a.1$
`$1,a$`	1, a	1, a	1, a

input	LaTeX	ionumbers	expected
		plus and minus	
`$+1$`	$+1$	$+1$	$+1$
`$-1$`	-1	-1	-1
`$++1$`	$++1$	$++1$	$++1$
`$+ +1$`	$++1$	$++1$	$++1$
`$+ + 1$`	$++1$	$++1$	$++1$
`$1+2$`	$1+2$	$1+2$	$1+2$
`$1+ 2$`	$1+2$	$1+2$	$1+2$
`$1 +2$`	$1+2$	$1+2$	$1+2$
`$1 + 2$`	$1+2$	$1+2$	$1+2$
`$1++2$`	$1++2$	$1++2$	$1++2$
`$x+1$`	$x+1$	$x+1$	$x+1$
`$1+x$`	$1+x$	$1+x$	$1+x$
`$x+y$`	$x+y$	$x+y$	$x+y$
		letter 'e'	
`$1e1234$`	$1e1234$	$1e1'234$	$1e1'234$
`$1e+1234$`	$1e+1234$	$1e+1'234$	$1e+1'234$
`$1e.$`	$1e.$	$1e.$	$1e.$
`$1e,$`	$1e,$	$1e,$	$1e,$
`$1e.1234$`	$1e.1234$	$1e'1234$	$1e'1234$
`$1e,1234$`	$1e, 1234$	$1e.123\,4$	$1e.123\,4$
`$1e++1234$`	$1e++1234$	$1e++1'234$	$1e++1'234$
`$1e 1234$`	$1e1234$	$1e1'234$	$1e1'234$
`$1e +1234$`	$1e+1234$	$1e+1'234$	$1e+1'234$
`$1 e1234$`	$1e1234$	$1e1'234$	$1e1'234$
		mixed numbers	
`$1.234,890$`	$1.234, 890$	$1'234.890$	$1'234.890$
`$1,234.890$`	$1, 234.890$	$1.234'\,890$	$1.234'\,890$
`$1234e5678$`	$1234e5678$	$1'234e5'678$	$1'234e5'678$
`$+1234e5678$`	$+1234e5678$	$+1'234e5'678$	$+1'234e5'678$
`$1234e+5678$`	$1234e+5678$	$1'234e+5'678$	$1'234e+5'678$
`$1.234e5.678$`	$1.234e5.678$	$1'234e5'678$	$1'234e5'678$
`$1,234e5,678$`	$1,234e5,678$	$1.234e5.678$	$1.234e5.678$
		single characters	
`$\sqrt 1$`	$\sqrt{1}$	$\sqrt{1}$	$\sqrt{1}$
`$\sqrt 1234$`	$\sqrt{1}234$	$\sqrt{1}'234$	$\sqrt{1}'234$
`$\sqrt +$`	$\sqrt{+}$	$\sqrt{+}$	$\sqrt{+}$
`$\sqrt ++$`	$\sqrt{+}+$	$\sqrt{+}+$	$\sqrt{+}+$
`$\sqrt +1234$`	$\sqrt{+}1234$	$\sqrt{+}1'234$	$\sqrt{+}1'234$
`$1e\sqrt +1234$`	$1e\sqrt{+}1234$	$1e\sqrt{+}1'234$	$1e\sqrt{+}1'234$
`$1\sqrt +1234e0$`	$1\sqrt{+}1234e0$	$1\sqrt{+}1'234e0$	$1\sqrt{+}1'234e0$