

	Index Form	Ordinary Form																Fraction Form					
Trillion	10^{12}	1	0	0	0	0	0	0	0	0	0	0	0	0	0								
Billion	10^9				1	0	0	0	0	0	0	0	0	0	0								
Million	10^6							1	0	0	0	0	0	0	0								
Hundred Thousand	10^5								1	0	0	0	0	0	0								
Ten Thousand	10^4									1	0	0	0	0	0								
Thousand	10^3										1	0	0	0	0								
Hundred	10^2											1	0	0	0								
Ten	10^1												1	0	0								
One	10^0													1	0								
Tenth	10^{-1}													0	.	1							$\frac{1}{10}$
Hundredth	10^{-2}													0	.	0	1						$\frac{1}{100}$
Thousandth	10^{-3}													0	.	0	0	1					$\frac{1}{1000}$
Ten-Thousandth	10^{-4}													0	.	0	0	0	1				$\frac{1}{10000}$
Hundred-Thousandth	10^{-5}													0	.	0	0	0	0	1			$\frac{1}{100000}$
Millionths	10^{-6}													0	.	0	0	0	0	0	1		$\frac{1}{1000000}$

Standard Index Form

Greater than or equal to 1 but less than 10

$\times$

base 10

power or index or exponent

multiplication

Power of 10

π e

$\times 10^x$

Metric Measures

Length

1km = 1000m

1m = 100cm

1cm = 10mm

Index Laws

For **powers** of the **same base**

$a^m \times a^n = a^{m+n}$

$a^m \div a^n = a^{m-n}$

$(a^m)^n = a^{m \times n}$