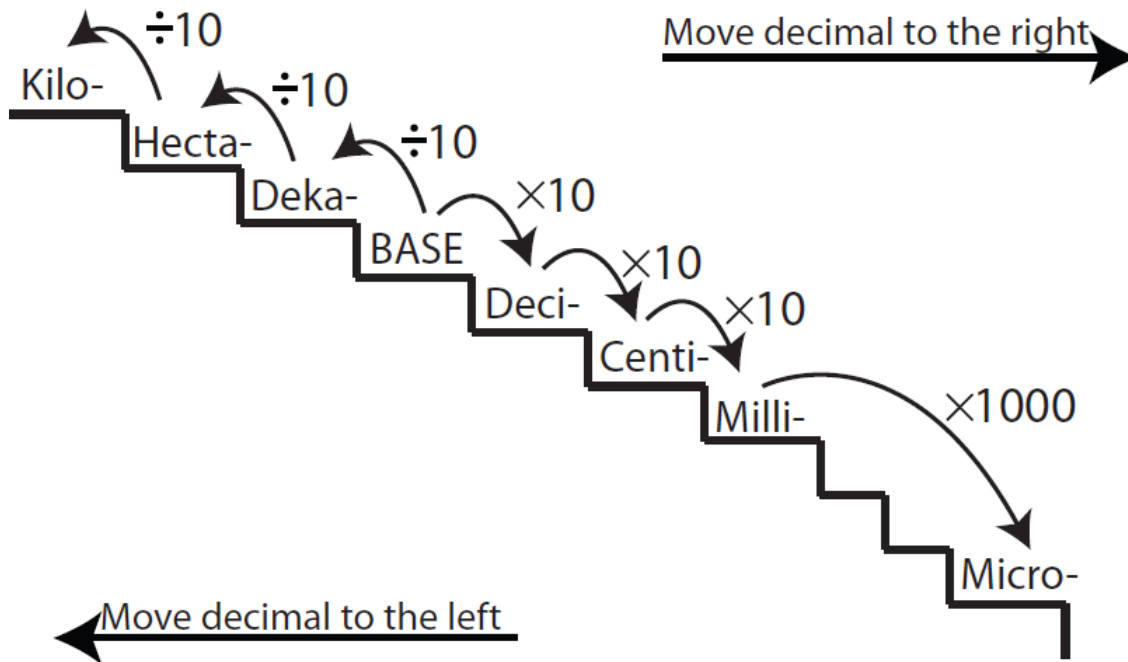


1 Conversion Stairs



Example

Convert 32900 centimetres to hectameters.

Solution:

Centimetres to hectametres moves to the left four times so we divide by 10 four times (or divide by 10^4).

$$\Rightarrow \frac{32900}{10^4}$$

$$\Rightarrow \frac{32900}{10000}$$

$$\Rightarrow 3.2900$$

2 Conversion Table

| Prefix | Symbol | 1000^m | 10^n | Decimal |
|--------|--------|---------------|------------|-----------------------------------|
| yotta | Y | 1000^8 | 10^{24} | 1 000 000 000 000 000 000 000 000 |
| zetta | Z | 1000^7 | 10^{21} | 1 000 000 000 000 000 000 000 |
| exa | E | 1000^6 | 10^{18} | 1 000 000 000 000 000 000 |
| peta | P | 1000^5 | 10^{15} | 1 000 000 000 000 000 |
| tera | T | 1000^4 | 10^{12} | 100 000 000 000 |
| giga | G | 1000^3 | 10^9 | 1 000 000 000 |
| mega | M | 1000^2 | 10^6 | 1 000 000 |
| kilo | k | 1000^1 | 10^3 | 1 000 |
| hecto | h | $1000^{2/3}$ | 10^2 | 100 |
| deca | da | $1000^{1/3}$ | 10^1 | 10 |
| | | 1000^0 | 10^0 | 1 |
| deci | d | $10^{-1/3}$ | 10^{-1} | 0.1 |
| centi | c | $1000^{-2/3}$ | 10^{-2} | 0.01 |
| milli | m | 1000^{-1} | 10^{-3} | 0.001 |
| micro | μ | 1000^{-2} | 10^{-6} | 0.000 001 |
| nano | n | 1000^{-3} | 10^{-9} | 0.000 000 001 |
| pico | p | 1000^{-4} | 10^{-12} | 0.000 000 000 001 |
| femto | f | 1000^{-5} | 10^{-15} | 0.000 000 000 000 001 |
| atto | a | 1000^{-6} | 10^{-18} | 0.000 000 000 000 000 001 |
| zepto | z | 1000^{-7} | 10^{-21} | 0.000 000 000 000 000 000 001 |
| yocto | y | 1000^{-8} | 10^{-24} | 0.000 000 000 000 000 000 000 001 |

Example

Convert 0.719 kilolitres to litres.

Solution:

One litre is 1000 kilolitres so we multiply by 10^3 .

$$\Rightarrow 0.719 \times 10^3$$

$$\Rightarrow 0.719 \times 1000$$

$$\Rightarrow 719$$