

Metric Notation

Powers of Ten

Engineering Notation

Objectives

Powers of Ten

- Convert decimal numbers to powers of ten and vice versa.

Metric Prefixes

- Convert decimal numbers to metric prefixes and vice versa.

Math Operations

- Add, subtract, multiply, and divide powers of ten.
- Add, subtract, multiply, and divide metric prefixes.

Powers of Ten

Coefficient

Base number

Exponent

Coefficient: Number that precedes the multiplication sign in a powers of ten equation. If no number is used in the position, the coefficient is 1.

$$4 \times 10^2$$

$$1.2 \times 10^4$$

$$5.63 \times 10^7$$

Base Number: Determined by the number system you are using. This number is 10 because we are using the decimal numbering system.

$$4 \times 10^2$$

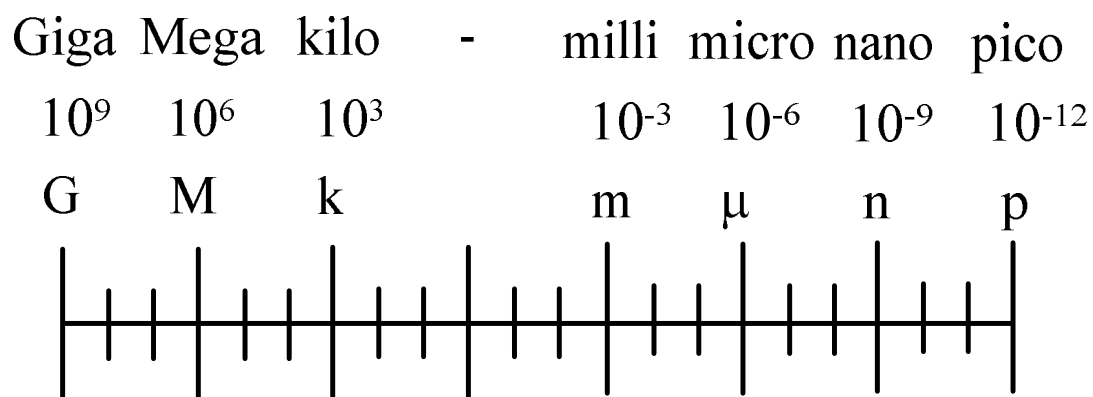
$$1.2 \times 10^4$$

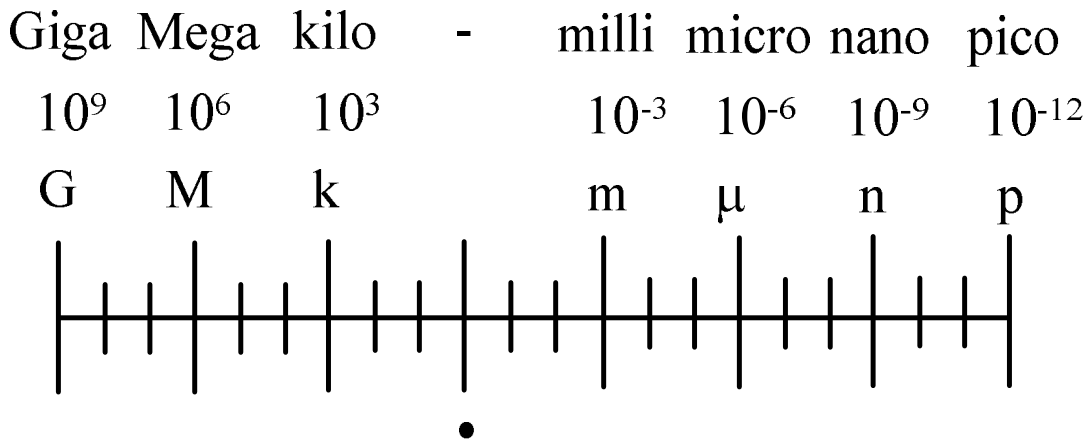
$$5.63 \times 10^7$$

Exponent: Represents the number of places the decimal point must be moved to get the final answer.

$$4 \times 10^3 = 4,000$$

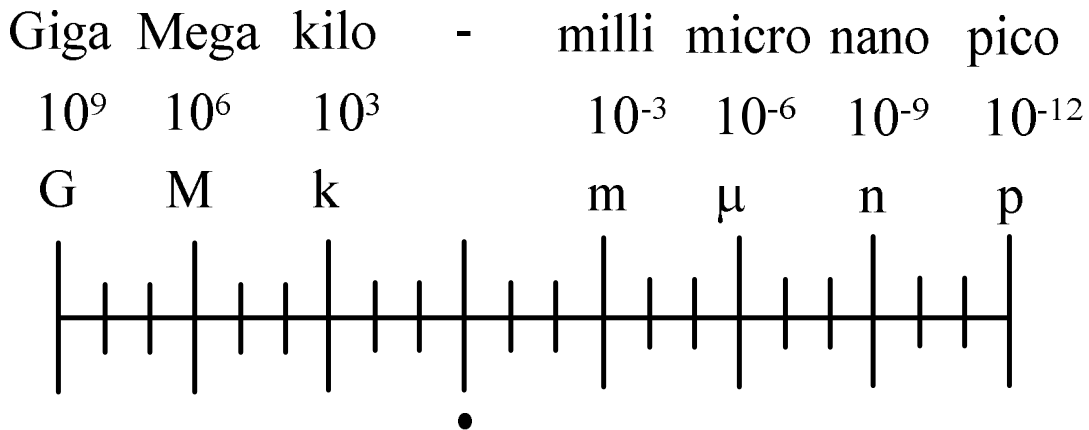
$$4 \times 10^{-3} = 0.004$$





Convert:

- | | | | |
|-----------|----|--|---|
| 3,000,000 | to | | M |
| 4,700 | to | | k |
| .005 | to | | m |
| 6850 | to | | M |
| 725k | to | | G |



Convert:

- 4.55m to _____ μ
- 783,000m to _____ k
- 200 to _____ n
- 13n to _____ p
- 12,000,000p to _____ μ