

## Metric Prefixes

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Metric prefixes, or SI prefixes, are words that precede a base unit to let you know the multiplication factor used. These multiplication factors are used to convert between two units.

For example:

$$5 \text{ cm} = 5 \text{ centimeters} = 5 \cdot 10^{-2} \text{ m} = 0.05 \text{ m}$$

$$15 \text{ Gs} = 15 \text{ gigaseconds} = 15 \cdot 10^9 \text{ s} = 15,000,000,000 \text{ s}$$

| Prefix | Symbol | Multiplication | Factor        |
|--------|--------|----------------|---------------|
| yotta  | Y      | 10             | <sup>24</sup> |
| zetta  | Z      | 10             | <sup>21</sup> |
| exa    | E      | 10             | <sup>18</sup> |
| peta   | P      | 10             | <sup>15</sup> |
| tera   | T      | 10             | <sup>12</sup> |
| giga   | G      | 10             | <sup>9</sup>  |
| mega   | M      | 10             | <sup>6</sup>  |
| kilo   | k      | 10             | <sup>4</sup>  |

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|       |    |    |                |    |
|-------|----|----|----------------|----|
| hecto | h  | 10 | <sup>2</sup>   | On |
| deka  | da | 10 | Ten            |    |
| deci  | d  | 10 | <sup>-1</sup>  | On |
| centi | c  | 10 | <sup>-2</sup>  | On |
| milli | m  | 10 | <sup>-3</sup>  | On |
| micro | μ  | 10 | <sup>-6</sup>  | On |
| nano  | n  | 10 | <sup>-9</sup>  | On |
| pico  | p  | 10 | <sup>-12</sup> | On |
| femto | f  | 10 | <sup>-15</sup> | On |
| atto  | a  | 10 | <sup>-18</sup> | On |
| septo | z  | 10 | <sup>-21</sup> | On |
| yocto | y  | 10 | <sup>-24</sup> | On |

## Vocabulary

Learn important vocabulary for this concept, including words that might appear in assessments (tests, quizzes, homework, etc.) that indicate the use of this concept.

| Important Vocabulary | Term | Context |
|----------------------|------|---------|
|----------------------|------|---------|

## Computer Animations

Experience computer simulators or animations that illustrate the concept discussed here. Many simulators or animations come with worksheets for use in class.

<http://www.braingle.com/trivia/13186/metric-prefixes.html>

<http://people.sinclair.edu/nickreeder/Flash/engPrefix.htm>

[http://www.quia.com/rr/30535.html?AP\\_rand=959892586](http://www.quia.com/rr/30535.html?AP_rand=959892586)

## Study Aides

Uncover helpful study tools, such as a mnemonic device or alternative ways to master the concept.

Study Aides

Kids Have Dropped Over Dead Converting Metrics

(Kilo Hecto Deka (Units) Deci Centi Milli)

Kangaroos Hop Down British Driveways Carrying M&Ms

(Kilo Hecto Deka BASE Deci Centi Milli)