

# Metric Prefixes for SI Units

| Prefixes                            |             |                                                  |               |            |               |
|-------------------------------------|-------------|--------------------------------------------------|---------------|------------|---------------|
| Purpose                             | Prefix Name | Preferred Pronunciation                          | Prefix Symbol | Value      |               |
| larger quantities<br>or whole units | yotta       | Yä-tuh                                           | Y             | $10^{24}$  | Septillion    |
|                                     | zetta       | ZETT-uh                                          | Z             | $10^{21}$  | Sextillion    |
|                                     | exa         | EX-uh                                            | E             | $10^{18}$  | Quintillion   |
|                                     | peta        | PET-uh                                           | P             | $10^{15}$  | Quadrillion   |
|                                     | tera        | TAIR-uh<br>Example: <a href="#">terahertz</a>    | T             | $10^{12}$  | Trillion      |
|                                     | giga        | JIG-uh<br>Example: <a href="#">gigawatt</a>      | G             | $10^9$     | Billion       |
|                                     | mega        | MEG-uh                                           | M             | $10^6$     | Million       |
|                                     | kilo        | KILL-oh<br>Example: <a href="#">kiloliter</a>    | k             | $10^3$     | Thousand      |
|                                     | hecto       | HECK-toe<br>Example: <a href="#">hectare</a>     | h             | $10^2$     | Hundred       |
|                                     | deka        | DECK-uh<br>Example: <a href="#">dekameter</a>    | da            | $10^1$     | Ten           |
|                                     |             |                                                  |               | $10^0$     | One           |
| smaller quantities<br>or sub units  | deci        | DESS-ih<br>Example: <a href="#">decimeter</a>    | d             | $10^{-1}$  | Tenth         |
|                                     | centi       | SENT-ih<br>Example: <a href="#">centigram</a>    | c             | $10^{-2}$  | Hundredth     |
|                                     | milli       | MILL-ih<br>Example: <a href="#">milliliter</a>   | m             | $10^{-3}$  | Thousandth    |
|                                     | micro       | MI-crow<br>Example: <a href="#">microgram</a>    | $\mu$         | $10^{-6}$  | Millionth     |
|                                     | nano        | NAN-oh<br>Example: <a href="#">nanometer</a>     | n             | $10^{-9}$  | Billionth     |
|                                     | pico        | PEEK-oh<br>Example: <a href="#">picogram</a>     | p             | $10^{-12}$ | Trillionth    |
|                                     | femto       | FEM-toe<br>Example: <a href="#">femtosecond</a>  | f             | $10^{-15}$ | Quadrillionth |
|                                     | atto        | AT-toe                                           | a             | $10^{-18}$ | Quintillionth |
|                                     | zepto       | ZEP-toe<br>Example: <a href="#">zeptosecond</a>  | z             | $10^{-21}$ | Sextillionth  |
|                                     | yocto       | YOCK-toe<br>Example: <a href="#">yoctosecond</a> | y             | $10^{-24}$ | Septillionth  |

Answers will vary – Walking to school is 1.2 km – student might say they walked 1200000000 micrometers to school.