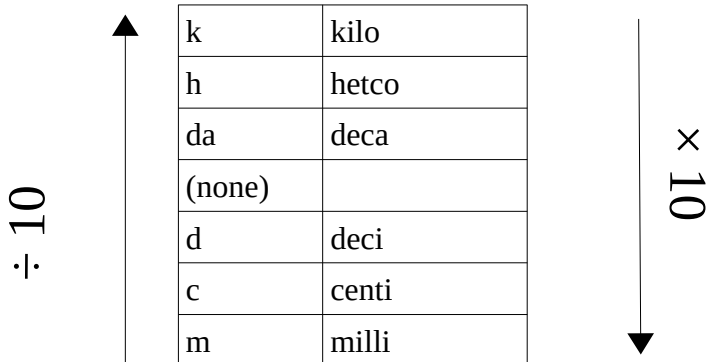


Review: Metric System

The metric system was developed 200-300 years ago. Its ease-of-use has made it the internationally-recognized system used by... everyone! To move between different units, you simply multiply (or divide) by powers of **10**.



Common Conversions you should know (for meters (m))

1 cm = 10mm
1 m = 100cm
1 m = 1000mm
1 km = 1000m

Example. “The Ghan” is the world’s longest train, stretching 1.09km in length. The width of a train car is about 3.12m and the height is about 4.88m. What is the approximate volume of the train?

The formula for volume is $V = A_{base} \times h$. We can approximate the train as a (giant) box, measuring, so our formula is $V = l \times w \times h$.

We need to be in the **same units**. 1.09km = 1090m.

$$\begin{aligned}V &= l \times w \times h \\V &= 1090 \times 3.12 \times 4.88 \\V &= 16595.904 \text{ m}^3\end{aligned}$$

The volume of the train is about 16596m³