Unit Knowledge Management

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Unit Converters

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Generally monolithic

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- "Handles" SI prefixing

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e.g. electronvolts to joules (by experimental determination)

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- Calendric time is a complete mess

$$\frac{\text{year}}{\text{month}} = 12; \frac{\text{month}}{\text{day}} \in [28, 31] = \{28, 29, 30, 31\}$$

but

$$
\begin{aligned}
\frac{\text{year}}{\text{day}} \quad &\in \quad [365, 366] \\
&\subseteq \quad [12 * 28, 12 * 31] \\
&\notin \quad \{12 * 28, 12 * 29, 12 * 30, 12 * 31\}
\end{aligned}
$$

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4. I don't know about months.

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$\sqrt{}$ prefix $\times$ unit $\rightarrow$ prefixedunit

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Is this really OpenMath territory? Or even MKM??

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Definitional Were experimental, now formalised, as in "1 yard = 0.9144 metre" or "$0°$C= $273.15°$K". Were normally `OMF`, but *should* be (quotients of) `OMI`.

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- "2 pints in metric" — do we want `litre` or `litre_pre1964`?

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Need `official` CDs of obsolete units.

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Relative vs Absolute
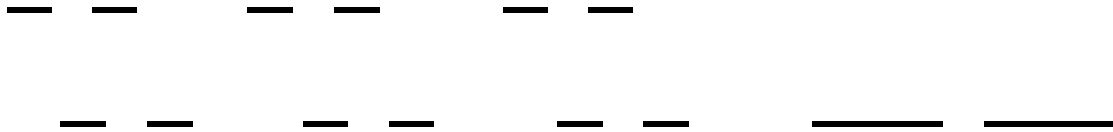
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Telling the two apart is a user interface issue.

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  - Neat user interfaces (by itself!).