

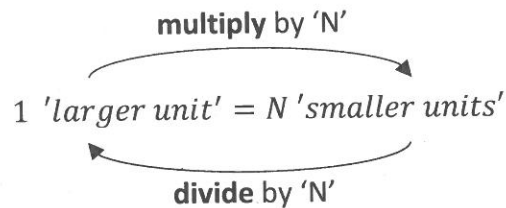
Now we can look at another method for conversions:

Method 2: Use a shortcut.

There is a quicker method than proportions to calculate unit conversions, but it depends on two factors:

1. Your conversion factor **MUST** be written in the form: 1 'larger unit' = N 'smaller units' (where N is some number other than 1).
2. You need to figure out whether to **multiply** or **divide** by the conversion factor.

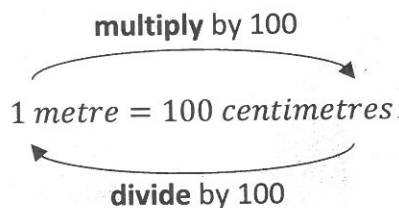
To figure out if you need to multiply or divide, you can use the following:



You **multiply** by the conversion factor when converting from a larger unit to a smaller unit, since there are many 'smaller units' contained in the 'larger unit'. *multiply*

You **divide** by the conversion factor when converting from a smaller unit to a larger unit because you are determining the number of groups of 'N' smaller units fit into the larger unit. *Divide*

Our example of converting 2.7 m to cm would look like this in the diagram: *large small → multiply*



So to convert we simply have to multiply 2.7 by 100. Note that you **do not have to show the diagram** when using the 'shortcut' method. You would simply write:

$$2.7 \times 100 = \cancel{2700} \text{ cm}$$

270 cm