

(moles & grams)

Converting

USE DIMENSIONAL ANALYSIS!

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→ use conversion factors

★ | MOLAR MASS | ★

$\frac{\text{g}}{\text{mol}}$	depends on <u>WHAT</u> substance you have
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Step #1:

Find molar mass!

ex: $\text{H}_2\text{O} = \frac{18 \text{ g}}{1 \text{ mol}}$ $\text{CO}_2 = \frac{44 \text{ g}}{1 \text{ mol}}$

| mol → g |

① 3 mol $\text{H}_2\text{O} \rightarrow ? \text{ g}$

m.m. = $\frac{18 \text{ g}}{1 \text{ mol}}$

$$\frac{3 \text{ mol} \mid 18 \text{ g}}{1 \text{ mol}} = \textcircled{54 \text{ g}}$$

② 1.7 mol $\text{NaCl} \rightarrow ? \text{ g}$

m.m. = $\frac{58.5 \text{ g}}{1 \text{ mol}}$

$$\frac{1.7 \text{ mol} \mid 58.5 \text{ g}}{1 \text{ mol}} = \textcircled{99.4 \text{ g}}$$

| g → mol |

③ 14 g $\text{CO}_2 \rightarrow ? \text{ mol}$

$$\frac{14 \text{ g} \mid 1 \text{ mol}}{44 \text{ g}} = \textcircled{3.18 \times 10^{-1} \text{ mol}}$$