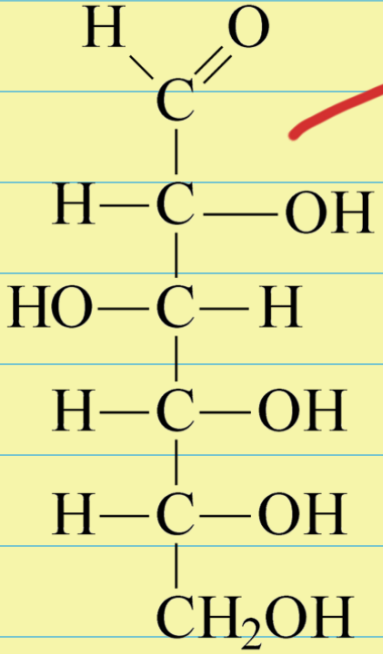
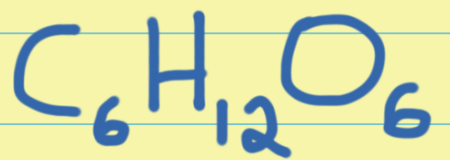


DETERMINAÇÃO DE FÓRMULAS

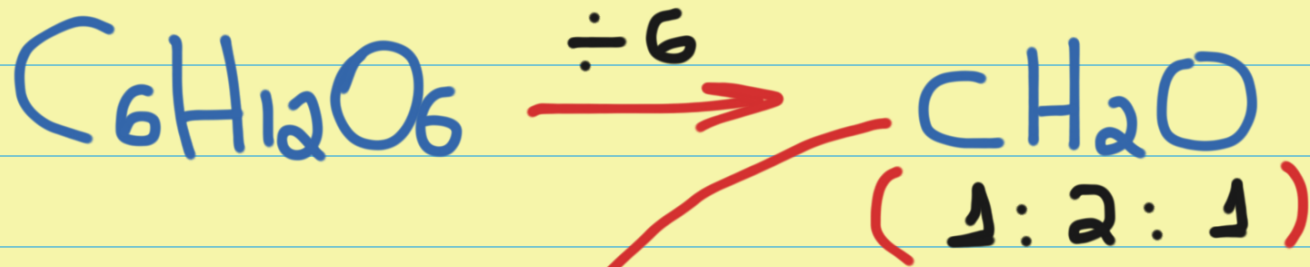
TIPOS DE FÓRMULAS:



→ Fórmula estrutural

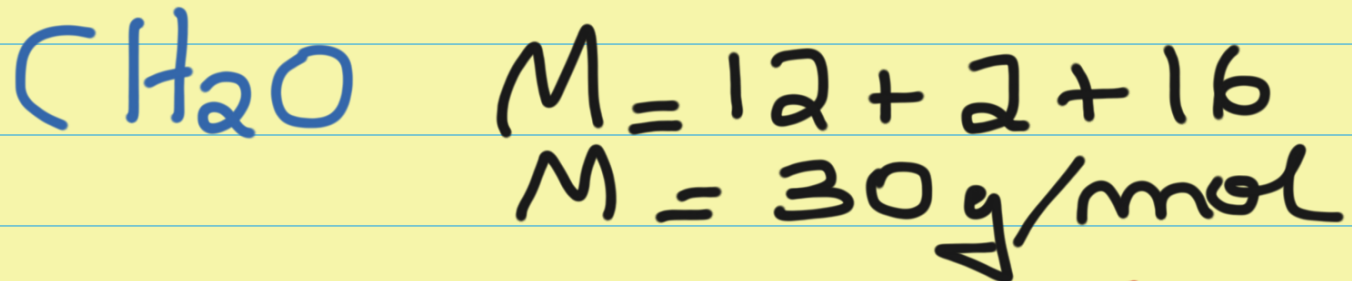


↳ Fórmula molecular



→
Fórmula mínima
ou empírica ou
reduzida.

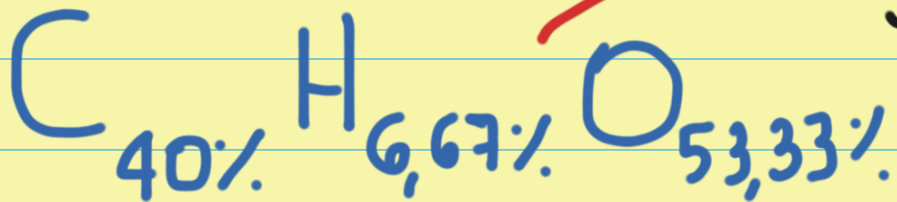
H_2O → a f. mínima é
a própria f. molecular.



$$\text{C} \quad \frac{12}{30} \times 100 = 40\% \quad (\text{four})$$

$$\text{H} \quad \frac{2}{30} \times 100 = 6,67\%$$

$$\text{O} \quad \frac{16}{30} \times 100 = 53,33\%$$



Formula
centesimal
or
percentual



(C 40% H 6,67% O 53,33%)

$m = m/M \rightarrow \text{CH}_2\text{O}$

C $\frac{40}{12} = 3,33$
 $\frac{3,33}{3,33} = 1$

H $\frac{6,67}{1} = 6,67$
 $\frac{6,67}{3,33} = 2$

O $\frac{53,33}{16} = 3,33$
 $\frac{3,33}{3,33} = 1$

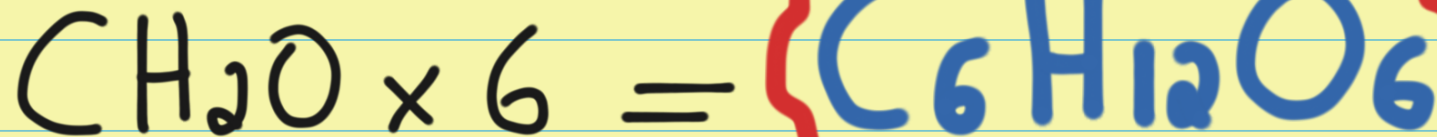


Dado: $M = 180 \text{ g/mol}$

$\text{CH}_2\text{O} \rightarrow M = 30 \text{ g/mol}$

$$X = \frac{M(\text{molecular})}{M(\text{mínimo})}$$

$$X = \frac{180}{30} = 6$$

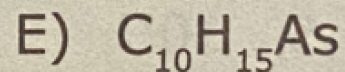
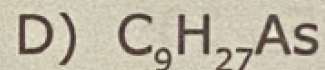
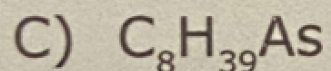
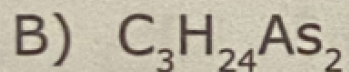
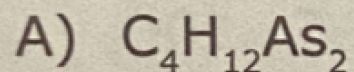




16.
YAEK

(UFAL) O cacodilo, que tem um odor forte de alho e é usado na manufatura de ácido cacodílico, um herbicida para a cultura do algodão, tem a seguinte composição percentual em massa: 22,88% de C, 5,76% de H e 71,36% de As e massa molar $209,96 \text{ g}\cdot\text{mol}^{-1}$. Qual a fórmula molecular do cacodilo?

~~209~~
210



$$\text{C} = 12$$

$$\text{H} = 1$$

$$\text{As} = 75$$

Done



Aa



7

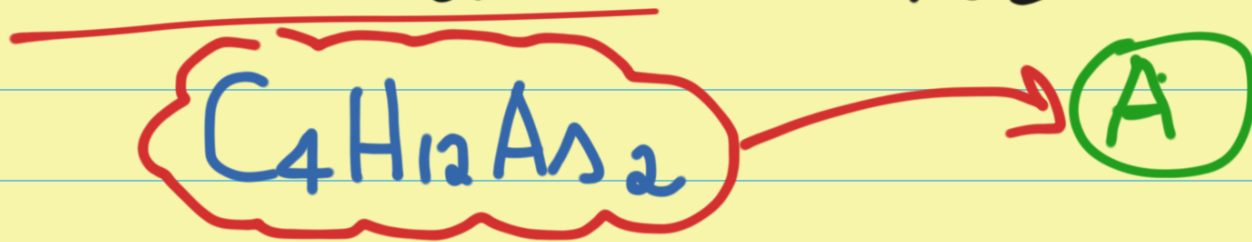


$$C \quad \frac{22,88}{12} = \frac{1,9}{0,95} = 2$$

$$H \quad \frac{5,76}{1} = \frac{5,76}{0,95} = 6$$

$$As \quad \frac{71,36}{75} = \frac{0,95}{0,95} = 1$$

$$C_2H_6As \quad \times 2 = \frac{210}{105} = 2$$





~~ou~~

$$210\text{g} \text{ --- } 100\%$$

$$\underline{12} \cdot x \text{ --- } 22,88\%$$

$$x = 4$$

$$210\text{g} \text{ --- } 100\%$$

$$\underline{1} \cdot y \text{ --- } 5,76\%$$

$$y = 12$$

$$210\text{g} \text{ --- } 100\%$$

$$\underline{75} \cdot z \text{ --- } 71,36\% \quad z = 2$$

