

Name : Date :

Practicing Percent Composition

Find the percent composition of all elements in the following compounds.



Cu = _____

Br = _____



Na = _____

O = _____

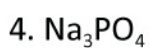
H = _____



N = _____

H = _____

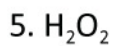
S = _____



Na = _____

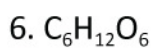
P = _____

O = _____



H = _____

O = _____



C = _____

H = _____

O = _____

Name : Date :

Practicing Percent Composition

Answers

Find the percent composition of all elements in the following compounds.

1. CuBr_2

Molar mass of $\text{CuBr}_2 = 223.37 \text{ amu}$

Cu: $(63.546 \text{ amu}/223.37 \text{ amu}) \times 100 \% = 28.45\%$

Cu = 28.45%

Br: $2 \times (79.904 \text{ amu}/223.37 \text{ amu}) \times 100 \% = 71.55\%$

Br = 71.55%

2. NaOH

Molar mass of $\text{NaOH} = 39.997 \text{ amu}$

Na: $(22.98 \text{ amu}/39.997 \text{ amu}) \times 100 \% = 57.48\%$

Na = 57.48%

O: $(16.00 \text{ amu}/39.997 \text{ amu}) \times 100 \% = 39.99\%$

O = 39.99%

H: $(1.008 \text{ amu}/39.997 \text{ amu}) \times 100 \% = 2.53\%$

H = 2.53%

3. $(\text{NH}_4)_2\text{S}$

Molar mass of $(\text{NH}_4)_2\text{S} = 68.142 \text{ amu}$

N: $2 \times (14.00 \text{ amu}/68.142 \text{ amu}) \times 100 \% = 41.1\%$

N = 41.1%

H: $8 \times (1.008 \text{ amu}/68.142 \text{ amu}) \times 100 \% = 11.8\%$

H = 11.8%

S: $(32.065 \text{ amu}/68.142 \text{ amu}) \times 100 \% = 47.1\%$

S = 47.1%

4. Na_3PO_4

Molar mass of $\text{Na}_3\text{PO}_4 = 163.94 \text{ amu}$

Na: $3 \times (22.99 \text{ amu}/163.94 \text{ amu}) \times 100 \% = 42.07\%$

Na = 42.07%

P: $(30.97 \text{ amu}/163.94 \text{ amu}) \times 100 \% = 18.9\%$

P = 18.9%

O: $4 \times (16.00 \text{ amu}/163.94 \text{ amu}) \times 100 \% = 39.02\%$

O = 39.02%

5. H_2O_2

Molar mass of $\text{H}_2\text{O}_2 = 34.0147 \text{ amu}$

H: $2 \times (1.008 \text{ amu}/34.0147 \text{ amu}) \times 100 \% = 5.8\%$

H = 5.8%

O: $2 \times (16.00 \text{ amu}/34.0147 \text{ amu}) \times 100 \% = 94.11\%$

O = 94.11%

6. $\text{C}_6\text{H}_{12}\text{O}_6$

Molar mass of $\text{C}_6\text{H}_{12}\text{O}_6 = 180.16 \text{ amu}$

C: $6 \times (12.011 \text{ amu}/180.16 \text{ amu}) \times 100 \% = 40\%$

C = 40%

H: $12 \times (1.008 \text{ amu}/180.16 \text{ amu}) \times 100 \% = 6.7\%$

H = 6.71%

O: $6 \times (16.00 \text{ amu}/180.16 \text{ amu}) \times 100 \% = 53.29\%$

O = 53.29%