Name : _____ Date : _____

Molar Mass and Percent Composition Worksheet

1. $Ca(OH)_2$

2. KCl

3. $Mg(NO_3)_2$

4. $(NH_4)_2SO_4$

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Answers

1. $Ca(OH)_2$

Molar mass of $Ca(OH)_2$ = Molar mass of Ca + (2 x Molar mass of O) + (2 x Molar mass of H) = 40.078 + 32 + 2.02 = 74.098 g/mol

% of Ca = (40.078/74.098) x 100 % = 54%
% of O = (32/74.098) x 100 % = 43%
% of H = (2.02/74.098) x 100 % = 3%

2. KCl

Molar mass of KCl = Molar mass of K + Molar mass of Cl = 39.0983 + 35.453 = 74.55 g/mol

% of K = (39.0983/74.55) x 100 % = 52.44%
% of Cl = (35.453/74.55) x 100 % = 47.56%

3. $Mg(NO_3)_2$

Molar mass of $Mg(NO_3)_2$ = Molar mass of Mg + (2 x Molar mass of N) + (6 x Molar mass of O) = 24.3 + 28 + 96 = 148.3 g/mol

% of Mg = (24.3/148.3) x 100 % = 16.5%
% of N = (28/148.3) x 100 % = 18.8%
% of O = (96/148.3) x 100 % = 64.7%

4. $(NH_4)_2SO_4$

Molar mass of $(NH_4)_2SO_4$ = (2 x Molar mass of N) + (8 x Molar mass of H) + Molar mass of S + (4 x Molar mass of O) = 28 + 8.08 + 32.065 + 64 = 132.145 g/mol

% of N = (28/132.145) x 100 % = 21.18%
% of H = (8.08/132.145) x 100 % = 6.11%
% of S = (32.065/132.145) x 100 % = 24.26%
% of O = (64/132.145) x 100 % = 48.45%