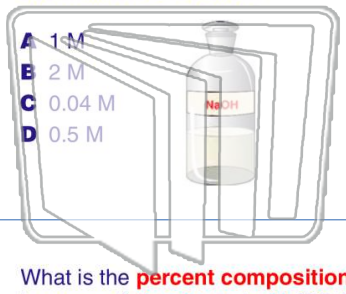
The Mole

CHEM

Name_____ Class_____ Date_____

1 What is the **molarity** of a solution containing 20 grams of NaOH in 500 milliliters of solution?

A 1 M
B 2 M
C 0.04 M
D 0.5 M



2 A student **neutralized** 16.4 milliliters of HCl by adding 12.7 milliliters of 0.620 M KOH. What was the **molarity** of the HCl acid?

A 0.168 M
B 0.480 M
C 0.620 M
D 0.801 M

3 What is the **percent composition** by mass of **aluminum** in $Al_2(SO_4)_3$ (gram-formula mass = 342 grams/mole)?

4 A sample of a compound contains 65.4 grams of zinc, 12.0 grams of carbon, and 48.0 grams of oxygen. What is the

5

7

A moles of solute per kilogram of solvent
B moles of solute per liter of solution
C mass of a solution
D volume of a solvent

per mole. The **molecular formula** for this compound is

A CH_2
B C_4H_6
C C_4H_8
D C_8H_4

9 What is the mass of 4.76 moles of Na_3PO_4 (gram-formula mass = 164 grams/mole)?

A 758 g
B 781 g
C 871 g
D 178 g

10 Given the balanced equation:

$$CaCO_3(s) + 2HCl(aq) \rightarrow CaCl_2(aq) + H_2O(l) + CO_2(g)$$

What is the total number of **moles of CO_2 formed** when 20 moles of HCl is completely consumed?

A 5.0 mol
B 10 mol
C 20 mol
D 40 mol

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1 What is the **molarity** of a solution containing 20 grams of NaOH in 500 milliliters of solution?

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