Name _____ Date _____ Score _____

Free sample

Stoichiometry and the Mole

Six questions to try. Then check your answers on page 2. Use H 1, C 12, O 16, Ca 40.

Remember

n = m ÷ M. 1 mole = **6.02 × 10²³** particles. For reacting masses: mass → moles → mole ratio → moles → mass. **% yield = actual ÷ theoretical × 100**.

1 What is the molar mass of **H_2O**?

2 What is the molar mass of **CO_2**?

3 How many moles are in **36 g** of water?

4 What is the mass of **0.5 mol** of $CaCO_3$ (M = 100)?

5 How many particles are in **1 mol**?

6 Expected 20 g, collected 15 g. Percentage yield?

Name _____ Date _____ Score _____

Answers

1. **18 g/mol** — 2(1) + 16 = 18.

2. **44 g/mol** — 12 + 2(16) = 44.

3. **2 mol** — 36 ÷ 18 = 2.

4. **50 g** — 0.5 × 100 = 50.

5. **6.02×10^{23}** — This is the Avogadro constant.

6. **75%** — 15 ÷ 20 × 100 = 75%.

In the full pack

14 questions in 5 parts (1 · molar mass, 2 · mass, moles and particles, 3 · reacting masses, 4 · limiting reactants and yield, 5 · a practical analysis task), a notes page, a full answer key, a 14-slide teaching deck with a baking-soda practical, and a 22-question online practice set (10 questions are free online).

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