

Name key Period All

Quiz 12 – Atomic and Molar Mass

20 Points

Complete the following chart based on the in class discussion. Use a scientific calculator to do the mass of a single atom (in grams)

Isotope	Boron-11 (B-11)	Potassium-41 (K-41)	Copper-65 (Cu-65)
Atomic Mass (amu)	11 amu	41 amu	65 amu
Atomic Mass* (g)	$1.84 \times 10^{-22} \text{ g}$	$6.85 \times 10^{-22} \text{ g}$	$1.09 \times 10^{-21} \text{ g}$
Molar Mass** (g/mol)	11 g/mol	41 g/mol	65 g/mol
Avg Atomic Mass (g/mol, periodic table)	10.81 g/mol	39.10 g/mol	63.55 g/mol

1 each
(3)

3 each
(9)

1 each
(3)

2 each
(6)

* Atomic Mass (g) = Atomic Mass (amu) $\times 1.67 \times 10^{-23} \text{ g/amu}$ (use scientific calculator)

** Molar Mass = Atomic Mass (amu) in (g/mol)

(21)

1 free

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Complete the following chart based on the in class discussion. Use a scientific calculator to do the mass of a single atom (in grams)

Isotope	Neon-22 (Ne-22)	Vanadium-51 (V-51)	Antimony-151 (Sb-151)
Atomic Mass (amu)	22 amu	51 amu	151 amu
Atomic Mass* (g)	$3.67 \times 10^{-22} \text{ g}$	$8.52 \times 10^{-22} \text{ g}$	$2.52 \times 10^{-21} \text{ g}$
Molar Mass** (g/mol)	22 g/mol	51 g/mol	151 g/mol
Avg Atomic Mass (g/mol, periodic table)	20.18 g/mol	50.94 g/mol	121.76 g/mol

1 each
(3)

3 each
(9)

1 each
(3)

2 each
(6)

* Atomic Mass (g) = Atomic Mass (amu) $\times 1.67 \times 10^{-23} \text{ g/amu}$ (use scientific calculator)

** Molar Mass = Atomic Mass (amu) in (g/mol)

(21)

1 free