

Chemistry  
Atomic Composition Calculations & Average Atomic Mass

Name: \_\_\_\_\_

Part 1: Atomic Composition Calculations

1. How many neutrons does an isotope of carbon-12 contain?
2. How many neutrons does an isotope of lead-208 contain?
3. How many protons, neutrons, and electrons are in a neutral isotope of barium-137?

Part 2: Average Atomic Mass

Use the following Percent Abundance tables to calculate the average atomic mass.

4. Two isotopes of bromine naturally occur:

Isotopes	Percent Abundance	Atomic Mass
Bromine-79	50.69%	78.92 amu
Bromine-81	49.31%	80.92 amu

Calculate the average atomic mass of bromine.

5. Two isotopes of copper naturally occur:

Isotopes	Percent Abundance	Atomic Mass
Copper-63	69.17%	62.9396 amu
Copper-65	30.83%	64.9278 amu

Calculate the average atomic mass of copper.

6. Lead has four naturally occurring isotopes:

Isotopes	Percent Abundance	Atomic Mass
Lead-204	1.4%	204 amu
Lead-206	24.1%	206 amu
Lead-207	22.1%	207 amu
Lead-208	52.4%	208 amu

Calculate the average atomic mass of lead.