

**Isotope Practice***Complete the table as shown.*

Element	Atomic Number	Mass Number	Protons & Electrons	Neutrons	Isotope	Symbol
<i>Neon</i>	<i>10</i>	<i>22</i>	<i>10</i>	<i>12</i>	<i>Neon-22</i>	$\begin{matrix} 22 \\ \text{Ne} \\ 10 \end{matrix}$
Calcium	20	46				
Oxygen	8	17				
Iron	26	57				
Zinc	30	64				
Mercury	80	204				

**Average Atomic Mass Problems***Round answers to the hundredths.*

- Find the average atomic mass of an atom of carbon.

Isotope	Isotope mass	Percent Abundance
Carbon-12	12.00	98.90
Carbon-13	13.00	1.10

2. Find the average atomic mass of an atom of nitrogen.

Isotope	Isotope mass	Percent Abundance
Nitrogen-14	14.00	99.63
Nitrogen-15	15.00	0.37

3. Find the average atomic mass of an atom of silicon.

Isotope name	Isotope mass (amu)	Relative Abundance
Silicon-28	27.98	92.21
Silicon-29	28.98	4.70
Silicon-30	29.97	3.09

4. What is average atomic mass of Lithium if 7.42% exists as  ${}^6\text{Li}$  (6.02 amu) and 92.58% exists as  ${}^7\text{Li}$  (7.02 amu)?

5. In a sample of 200 Chlorine atoms, it is found that 151 are  ${}^{35}\text{Cl}$  (34.97 amu), and 49 are  ${}^{37}\text{Cl}$  (36.97 amu). What is the average atomic mass of Chlorine?

6. Helium has two naturally occurring isotopes, helium-3 and helium-4. The atomic mass of helium is 4.003 amu. Which isotope is more abundant in nature? Explain.

7. Without doing any math, are there more Bromine-79 atoms or more Bromine-80 atoms on earth? (Hint: look at the periodic table.)