

1. Verify that the atomic mass of magnesium is 24.31 amu, given the following information:
 ^{24}Mg , mass = 23.985042 amu; percent abundance = 78.99%
 ^{25}Mg , mass = 24.985837 amu; percent abundance = 10.00%
 ^{26}Mg , mass = 25.982593 amu; percent abundance = 11.01%

2. A student looked up the naturally occurring isotopes of bromine and found the following information:
50.54% of the naturally occurring isotopes of bromine have an atomic mass of 78.92 amu while 49.46% of the naturally occurring isotopes of bromine have an atomic mass of 80.92 amu. Calculate the average atomic mass of bromine, showing all work:

3. Hydrogen has 2 isotopes, Hydrogen-1 (99.985%) and Hydrogen-2 (.015%) otherwise known as Deuterium. What is the average atomic mass of Hydrogen?

4. A certain element X has four isotopes.
 - * 95.0% of X has a mass of 31.97207 amu.
 - * 0.760% of X has a mass of 32.97146 amu.
 - * 4.22% of X has a mass of 33.96786 amu.
 - * 0.0140% of X has a mass of 35.96709 amu.

What is the atomic mass of element X?

5. The element europium exists in nature as two isotopes: Eu-151 has a mass of 150.9196 amu and Eu-153 has a mass of 152.9209 amu. The average atomic mass of europium is 151.96 amu. Calculate the relative abundance of the two europium isotopes.
6. Gallium consists of two naturally occurring isotopes with masses of 68.926 and 70.925 amu. The average atomic mass of Ga is 69.72 amu. Calculate the abundance of each isotope.
7. Strontium has four stable isotopes, Strontium-84 has a very low natural abundance, but ^{86}Sr , ^{87}Sr , and ^{88}Sr are all reasonably abundant. Which of these more abundant isotopes predominates? (Hint: look at your periodic table)