Average Atomic Mass Practice Problems

1. What is the atomic mass of hafnium if, out of every 100 atoms, 5 have a mass of 176, 19 have a mass of 177, 27 have a mass of 178, 14 have a mass of 179, and 35 have a mass of 180.0?

2. Calculate the average atomic mass of lithium, which occurs as two isotopes that have the following atomic masses and abundances in nature: Li-6.017, 7.30% and Li-7.018, 92.70%.

3. Calculate the average atomic mass of magnesium using the following data for three magnesium isotopes. (Abundance not in percentage form.)

Isotope	mass (amu)	relative abundance
Mg-24	23.985	0.7870
Mg-25	24.986	0.1013
Mg-26	25.983	0.1117

4. Lithium has two naturally occurring isotopes: lithium-6 and lithium-7. If the average atomic mass of lithium is 6.941 atomic mass units, which isotope is the most abundant? How do you know?

Bonus: Calculate the percentages of each isotope present in a mixture of ^{113}In and ^{115}In which has an average atomic mass of 114.8 amu.