Exercise 2.2
Isotopic Mass Calculations

Isotopic masses and average atomic masses are reported in atomic mass units (u). Molar masses are reported in g/mol. While 1 u = 1 g/mol, it is important to use the correct units for each property.

1. Strontium (Sr) has four naturally occurring isotopes as shown in the table below. Calculate the average atomic mass of strontium.

Isotope	Natural Abundance	Isotopic Mass
^{84}Sr	0.56 %	83.9134 u
^{86}Sr	9.86 %	85.9093 u
^{87}Sr	7.00 %	86.9089 u
^{88}Sr	82.58 %	87.9056 u

2. Rubidium has two naturally occurring isotopes: ^{85}Rb and ^{87}Rb. The natural abundance of ^{85}Rb is 72.165% and it has an isotopic mass of 84.9118 u. Calculate the isotopic mass of ^{87}Rb.

3. There are two naturally occurring isotopes of iridium (Ir). ^{191}Ir has a mass of 190.9606 u while ^{193}Ir has a mass of 192.9629 u. Calculate the percent abundance of each isotope of iridium in a natural sample.