D4

AVERAGE ATOMIC MASS PROBLEMS

1. Neon has two isotopes: Ne-20 (having a mass of **20 amu**) and Ne-22 (having a mass of **22 amu**). Given the following abundances of these isotopes in nature, what is the average atomic mass of neon?

Mass number	Abundance
Ne-20	90%
Ne-22	10%

2. What is the average atomic mass of silicon given the following abundance information on the isotopes of silicon?

Mass number	Abundance
Si-28	90 %
Si-29	5 %
Si-30	5 %

3. What is the average atomic mass of hafnium given the following abundance information on its isotopes?

Mass number	Abundance
Hf-176	5 %
Hf-177	20%
Hf-178	30 %
Hf-179	15%
Hf-180	30%

4. Calculate the atomic mass of potassium if the abundance atomic masses of the isotopes making up its naturally occurring samples are as given below.

Isotope	Relative abundance	Atomic Mass
potassium-39	95 %	38 amu
potassium-41	5 %	40 amu