

Isotopes and % Abundance

Name: _____

Section: _____

1. Calculate the atomic mass for lithium given the following data for its naturally occurring isotopes.

Element	Isotopic Mass	% Abundance
${}^6\text{Li}$	6.015 amu	7.42%
${}^7\text{Li}$	7.016 amu	92.58%

2. Calculate the atomic mass for magnesium given the following data for its naturally occurring isotopes.

${}^{24}\text{Mg}$	23.985 amu	78.70%
${}^{25}\text{Mg}$	24.986 amu	10.13%
${}^{26}\text{Mg}$	25.983 amu	11.17%

3. Calculate the atomic mass for iron given the following data for its naturally occurring isotopes.

${}^{54}\text{Fe}$	53.940 amu	5.82%
${}^{56}\text{Fe}$	55.935 amu	91.66%
${}^{57}\text{Fe}$	56.935 amu	2.19%
${}^{58}\text{Fe}$	57.933 amu	0.33%

4. Chlorine has two naturally occurring isotopes: ${}^{35}\text{Cl}$ and ${}^{37}\text{Cl}$. Which isotope is more abundant if the stated atomic mass of chlorine is 35.35 amu?