

Name \_\_\_\_\_  
Regents Chemistry

Worksheet  
Atomic Mass

The reference element for atomic mass is C-12, the most abundant isotope of carbon. Its atomic mass is defined to be exactly 12 a.m.u. Thus 1 a.m.u. is exactly one twelfth the mass of a carbon-12 atom. In the reference table the atomic mass of carbon is 12.011 u rather than 12, because a small amount (about 1%) of the naturally occurring material is an isotope called carbon-13. 12.011u reflects the small contribution of carbon-13.

Calculate the molar masses of these elements by using the percent abundance and the isotopes mass in a.m.u.

<u>Isotope</u>	<u>% Abundance</u>	<u>Mass (a.m.u.)</u>
Nitrogen-14	99.634	14.003074
Nitrogen-15	0.366	15.000108
Oxygen-16	99.762	15.994915
Oxygen-18	0.200	17.999160
Neon-20	90.51	19.992435
Neon-22	9.22	21.991383
Silver-107	51.839	106.905092
Silver-109	48.161	108.904757
Iridium-191	37.3	190.960584
Iridium-193	62.7	192.962917
Chlorine-35	75.77	34.968852
Chlorine-37	24.23	36.965903
Boron-10	19.9	10.012937
Boron-11	80.1	11.009305
Hydrogen	99.985	1.007825
Deuterium (H-2)	0.015	2.014102
Tritium (H-3)	0.00	3.016050