

## Isotopes Assignment

1. What is the same in two isotopes of the same element?
2. What is different in two isotopes of the same element?
3. Find the average atomic mass hydrogen, given the information on its isotopes.

Isotope	Number of protons	Number of neutrons	Mass number	Relative Abundance (%)
1	1	0	1	99.985
2	1	1	2	0.015

4. Boron (which has 2 stable isotopes) has an average atomic mass of 10.801 amu. Information on these two isotopes is given in the table below. What is the mass number of the second isotope?

Isotope	Number of protons	Number of neutrons	Mass number	Relative Abundance (%)
1	5	5	10	?
2	5	?	?	80.1

5. Chlorine has 2 stable isotopes. Its atomic mass is 35.48 amu, and 76% of its atoms have a mass number of 35. What is the mass number of the other chlorine isotope?

6. What is the average atomic mass of copper?

Isotope	Relative Abundance
Cu-63	69.2 %
Cu-65	30.8 %

7. The average atomic mass of silver is 107.96 amu. How many neutrons does the first isotope of silver have?

Isotope	Number of protons	Number of neutrons	Relative abundance
1	?	?	52 %
2	47	62	?

8. How many neutrons does the third isotope of Sulfur have? (Note: the average atomic mass of Sulfur is 32.09 amu.)

Isotope	Number of protons	Atomic mass	Relative abundance (%)
1	16	32.00 amu	95
2	16	33.00 amu	1
3	16	?	?