



Name _____

Date _____

Worksheet: Atomic Structure

- The following descriptions represent the subatomic composition of various particles. Determine the net charge on each particle.
 - 1 proton, 1 neutron, and 1 electron
 - 9 protons, 10 neutrons, and 10 electrons
 - 23 protons, 28 neutrons, and 18 electrons
- What must be the same and what must be different, about the nuclei of two atoms that are related to each other as isotopes?
- Fill in the missing data in the chart below:

Symbol	He				U	
Atomic Number						42
Mass Number	4	40		210		95
Number of protons		20		82		
Number of neutrons			110		143	
Number of electrons			74			

4. Although the atomic mass for zinc is listed as 65.39, there is no zinc atom with that mass. Explain.

5. Calculate the atomic mass of magnesium based on the following information:

Isotope	Relative Abundance	Atomic mass
Magnesium-24	78.70%	23.985
Magnesium-25	10.13%	24.986
Magnesium-26	11.17%	25.983

6. If two atoms of oxygen have different numbers of neutrons, which property of the two atoms will be different?

7. If two atoms of magnesium have different numbers of electrons, which property of the two atoms will be different?

8. Given the following:
- a) What element is this? _____
 - b) What is the atomic number? _____
 - c) What is the mass number? _____
 - d) How many neutrons does it have? _____
 - e) How many protons? _____
 - f) How many electrons? _____
 - g) What is the net charge on the atom? _____
 - h) What is the charge on the nucleus? _____

