

Name : _____

Band : _____

1. Calculate the average atomic mass of oxygen knowing it's three isotopes. (Use table 4.3, page 97)

= _____

2. Calculate the average atomic mass of the element zinc knowing it has five different isotopes. (Use table 4.3, page 97)

= _____

3. Calculate the numbers of protons, electrons, and neutrons in each of zinc's five isotopes.

P _ E _ N _

P _ E _ N _

P _ E _ N _

P _ E _ N _

P _ E _ N _

4. Chlorine has two isotopes $^{35}_{17}\text{Cl}$, and $^{37}_{17}\text{Cl}$; calculate the percentages of each if it's atomic mass is listed as 35.453.

= _____ % for ^{35}Cl = _____ % for ^{37}Cl

5. Calculate the average atomic mass for copper having two isotopes:
 $^{63}_{29}\text{Cu}$ (62.9% at 62.95 atomic mass units) $^{65}_{29}\text{Cu}$ (30.8% at 64.93 atomic mass units)

= _____ (copper)

6. Compare the relative size and relative density of an atom to it's nucleus.

7. Explain how there can be more than 1000 different atoms when there are only 109 different elements on the Periodic Table ?

8. What parts of Dalton's atomic theory no longer agree with our current picture of the atom? (Use the textbook to reference Dalton's atomic theory, there are 2 parts that do not agree)

9. Calculate the atomic mass unit of lead from the following data: = _____ (lead)

	Type 1	Type 2	Type 3	Type 4
protons	82	82	82	82
neutrons	122	124	125	126
percent	1.37 %	26.6%	20.82%	51.55%

10. What information about an element's isotopes are need to calculate the elements atomic mass?
