**CC3 Revision Mat: Atomic Structure**

**Isotopes**

Define what an isotope is

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

Calculate the relative atomic mass of the following isotopes:

1. 69% 63Cu and 31% 65Cu
2. 79% 24Mg, 10% 25Mg and 11% 26Mg

Neon has a relative atomic mass of 20.2 and is made up of 2 atoms: 20Ne and 22Ne. Explain which of these isotopes is the most abundant.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**Atomic Number:**

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiXp77xjNHQAhXKbhQKHd2kCJ8QjRwIBw&url=http%3A%2F%2Fwww.funscience.in%2Fstudy-zone%2FPhysics%2FRadioactivityAndNuclearReactions%2FAtomicNumberAndMassNumber.php&psig=AFQjCNF2szNDCMV90LMeVmdfJO8IsMSxaA&ust=1480616603583894)

Define mass number:

………………………………………………………………………………………………………………………………………………………………………………

Define atomic number:

………………………………………………………………………………………………………………………………………………………………………………

How do you calculate the number of protons from the mass and atomic number?

…………………………………………………………………………………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Symbol | Mass number | Atomic number | Protons | Neutrons | Electron |
| K |  |  |  |  |  |
| Ar |  |  |  |  |  |
| Si |  |  |  |  |  |
| N |  |  |  |  |  |
| O |  |  |  |  |  |

***A manganese atom has 25 protons, 30 neutrons and 25 electrons.***

What is the mass number? \_\_\_\_\_\_\_\_\_\_\_

What is the atomic number? \_\_\_\_\_\_\_\_\_\_

**Structure of the atom:**

Draw a diagram of an atom

*Label the 3 subatomic particles*

What particles are found inside the nucleus of an atom?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What particles are found in shells?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete the table:

|  |  |  |
| --- | --- | --- |
|  | Relative mass | Relative charge |
| Proton |  |  |
| Neutron |  |  |
| Electron |  |  |

Explain why atoms have no overall charge>

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