ATOMIC STRUCTURE (B)

1 This question is about $^{23}_{11}Na$ atoms.

a How many protons, neutrons and electrons are in this atom?

protons = **11** neutrons = **12** electrons = **11**

b What is the atomic number of this atom? **11**

c What is the mass number of this atom? **23**

d The diameter of this atom is 360 pm. State this in metres in standard form. **3.6×10^{-10} m**

2 There are two isotopes of copper, which are shown in the table.

Isotope	$^{63}_{29}Cu$	$^{65}_{29}Cu$
Abundance	69.2%	30.8%

a Calculate the relative atomic mass of copper.

relative atomic mass $= \frac{(63 \times 69.2)+(65 \times 30.8)}{69.2+30.8} = 63.6$

b Explain why they are both atoms of copper. **both contain 29 protons**

c State similarities and differences between these atoms in terms of their numbers of protons, neutrons and electrons.

similarities **same number / 29 protons**

same number / 29 electrons

differences **different number / 34 v 36 neutrons**