



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

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

protons = neutrons = electrons =

b What is the atomic number of this atom?

c What is the mass number of this atom?

d The diameter of this atom is 360 pm. State this in metres in standard form.

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

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

a Calculate the relative atomic mass of copper.

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b Explain why they are both atoms of copper.

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

similarities

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differences

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