

Atomic number (Z) and mass number (A)

1) Define the terms (i) atomic number (ii) mass number

2) What is the ratio of protons to electrons in a neutral atom?

3) Calculate the number of protons, neutrons and electrons in the following isotopes:

a) ${}^2\text{H}$

b) ${}^{14}\text{C}$

c) ${}^{14}\text{N}$

d) ${}^{40}\text{Ca}$

e) ${}^{37}\text{Cl}$

f) ${}^{79}\text{Br}$

g) ${}^{206}\text{Pb}$

h) ${}^{235}\text{U}$

4) Define the term isotope:

5) Summarise the difference in physical and chemical properties for isotopes of the same element.