

- Atomic Number: # of Protons, # of electrons
 - Mass Number (Whole #): # Protons + Neutrons
 - Atomic Mass (decimal): Weighted Average of mass of Isotopes
 - Isotope: element w/ different # of neutrons
- Diagram illustrating Sodium (Na) with atomic number 11, mass number 23, and atomic mass 22.98. The mass number 23 is shown as the sum of 11 protons and 12 neutrons. The atomic mass 22.98 is shown as the weighted average of isotopes, with Sodium-23 being the most abundant.

Short Answers

- ① X-35 X-40
Two isotopes
Atomic Mass = 39.42 (close)
Which is more abundant?

X-40

- ② Element X 10% ^{40}X , 20% ^{42}X
70% ^{45}X

Find Atomic Mass:

$$.10(40) + .20(42) + .70(45) =$$

↑ ↑
% mass

- ③ Given # of neutrons and the mass #
Find atomic #

$$\text{Atomic \#} = \text{Mass \#} - \text{neutrons}$$

Essay

In what way are two isotopes of the same element different? Explain why isotopes of the same element have the same chemical behavior.