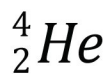


Name : _____ Score : _____ Date : _____

Practicing with Isotopes

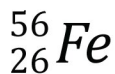
1. Complete the following questions. Assume all the atoms are neutral.



Element : _____

of protons: _____

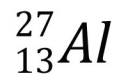
of neutrons: _____



Element: _____

of protons: _____

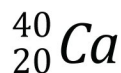
of neutrons: _____



Element: _____

of protons: _____

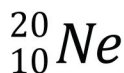
of neutrons: _____



Element: _____

of protons: _____

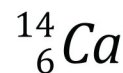
of neutrons: _____



Element: _____

of protons: _____

of neutrons: _____



Element: _____

of protons: _____

of neutrons: _____



Element: _____

of protons: _____

of neutrons: _____



Element: _____

of protons: _____

of neutrons: _____



Element: _____

of protons: _____

of neutrons: _____

2. Calculate the average atomic mass for the following element from the given information about the relevant isotopes:

Isotope 1: Mass = 35 amu

Abundance = 75.53%

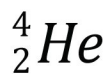
Isotope 2: Mass = 37 amu

Abundance = 24.47%

Which element is this? _____

Practicing with Isotopes

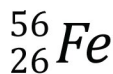
1. Complete the following questions. Assume all the atoms are neutral.



Element: Helium

of protons: 2

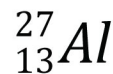
of neutrons: 2



Element: Iron

of protons: 26

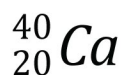
of neutrons: 56



Element: Aluminium

of protons: 13

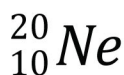
of neutrons: 27



Element: Calcium

of protons: 20

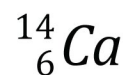
of neutrons: 40



Element: Neon

of protons: 20

of neutrons: 10



Element: Carbon

of protons: 6

of neutrons: 14



Element: Fluorine

of protons: 9

of neutrons: 19



Element: Hydrogen

of protons: 1

of neutrons: 1



Element: Hydrogen

of protons: 1

of neutrons: 2

2. Calculate the average atomic mass for the following element from the given information about the relevant isotopes:

Isotope 1: Mass = 35 amu Abundance = 75.53%

Isotope 2: Mass = 37 amu Abundance = 24.47%

To calculate the average atomic mass for the element with the given isotopic information, you can use the following formula:

Average Atomic Mass = (Fractional Abundance Isotope 1 * Mass Isotope 1) +
(Fractional Abundance Isotope 2 * Mass Isotope 2)

Given the information:

Isotope 1 has a mass of 35 amu and a fractional abundance of 75.53% (or 0.7553).

Isotope 2 has a mass of 37 amu and a fractional abundance of 24.47% (or 0.2447).

Now, plug these values into the formula:

Average Atomic Mass = (0.7553 * 35 amu) + (0.2447 * 37 amu)

Average Atomic Mass = (26.41155 amu) + (9.1199 amu)

Average Atomic Mass ≈ 35.53145 amu

So, the average atomic mass for the element is approximately 35.53 atomic mass units (amu).

Which element is this? Chlorine