

Task

Use the words below to fill in the blanks to complete the sentences.

different, bottom, abundance, average, shells, positively, positive, negative, top, atomic, neutral, filtration, compounds, elements, electrons, mass, mass, nucleus, protons, negatively, neutrons, ionic, equal, isotopes, share, lose, gain, changed distillation, covalent

Atoms are made from, and Protons and neutrons are in the of the atom. Electrons move around the nucleus in electron

Protons are charged and electrons are charged. Atoms are (no charge), as they have numbers of protons and electrons.

The number of an element is the number of protons in one of its atoms. It is at the of the element symbol in the periodic table. The number of an element is the total number of protons and neutrons in one of its atoms. It is at the of the element symbol in the periodic table.

..... of an element have the same number of protons, but different numbers of neutrons e.g. carbon-12 and carbon-13.

The relative atomic of an element is an value that takes account of the of the isotopes of the element.

Two or more elements which are joined by chemical bonds form

..... bonding is between a metal and a non-metal e.g. sodium (Na) and chlorine (Cl) to form sodium chloride. The metal ions electrons, becoming and the non-metals electrons, becoming The positive and negative charges are attracted to each other.

..... bonding is between non-metals which electrons e.g. hydrogen (H) and chlorine (Cl) which combine to form hydrogen chloride (HCl).

The properties of a compound are to the original elements because they have undergone a chemical change. It is difficult to separate a compound back into the original

Mixtures can be separated by physical processes such as and The chemical properties of each substance in a mixture are not

Answers

Atoms are made up of **electrons, neutrons and protons**. Protons and neutrons are in the **nucleus** of the atom. Electrons move around the nucleus in electron **shells**.

Protons are **positively** charged and electrons are **negatively** charged. Atoms are **neutral** (no charge), as they have **equal** numbers of protons and electrons.

The **atomic** number of an element is the number of protons in one of its atoms. It is at the **bottom** of the element symbol in the periodic table. The **mass** number of an element is the total number of protons and neutrons in one of its atoms. It is at the **top** of the element symbol in the periodic table.

Isotopes of an element have the same number of protons, but different numbers of neutrons e.g. carbon-12 and carbon-13.

The relative atomic **mass** of an element is an **average** value that takes account of the **abundance** of the isotopes of the element.

Two or more elements which are joined by chemical bonds form **compounds**.

Ionic bonding is between a metal and a non-metal e.g. sodium (Na) and chlorine (Cl) to form sodium chloride. The metal ions **lose** electrons, becoming **positive** and the non-metals **gain** electrons, becoming **negative**. The positive and negative charges are attracted to each other.

Covalent bonding is between non-metals which **share** electrons e.g. hydrogen (H) and chlorine (Cl) which combine to form hydrogen chloride (HCl).

The properties of a compound are **different** to the original elements because they have undergone a chemical change. It is difficult to separate a compound back into the original **elements**.

Mixtures can be separated by physical processes such as **filtration** and **distillation**. The chemical properties of each substance in a mixture are not **changed**.