

Name : _____ Date : _____

Basic Atomic Structure Worksheet

- ① The central part of the atom is called the _____
- ② Electrons are found _____ the nucleus.
- ③ The nucleus has a _____ charge and contains _____ and _____.
- ④ The _____ and the _____ have the same mass.
- ⑤ Give the charge of each:
Proton _____ Neutron _____ Electron _____
- ⑥ Order from the lightest to heaviest: Protons, Electrons, Nucleus, Neutrons
- ⑦ The _____ of an element is the average mass of an element's naturally occurring atoms, or isotopes, taking into account the _____ of each isotope.
- ⑧ The _____ of an element is the total number of protons and neutrons in the _____ of the atom.
- ⑨ The mass number is used to calculate the number of _____ in one atom of an element. In order to calculate the number of neutrons you must subtract the _____ from the _____.
- ⑩ Answer the following questions about the $^{20}\text{Ne}_{10}$ atom:
 - a) No. of protons _____
 - b) No. of neutrons _____
 - c) No. of electrons _____
 - d) Mass number _____
 - e) Atomic number _____
 - f) No. of valence electrons _____

Basic Atomic Structure Worksheet

Answers

- ① The central part of the atom is called the nucleus
- ② Electrons are found outside the nucleus.
- ③ The nucleus has a positive charge and contains protons and neutrons.
- ④ The proton and the neutron have the same mass.
- ⑤ Give the charge of each:
Proton +1 Neutron 0 Electron -1
- ⑥ Order from the lightest to heaviest: Protons, Electrons, Nucleus, Neutrons
Electrons < Proton < Neutron < Nucleus
- ⑦ The atomic mass of an element is the average mass of an element's naturally occurring atoms, or isotopes, taking into account the mass of each isotope.
- ⑧ The mass number of an element is the total number of protons and neutrons in the nucleus of the atom.
- ⑨ The mass number is used to calculate the number of neutrons in one atom of an element. In order to calculate the number of neutrons you must subtract the atomic number from the mass number.
- ⑩ Answer the following questions about the $^{20}\text{Ne}_{10}$ atom:
- a) No. of protons 10 b) No. of neutrons 10
- c) No. of electrons 10 d) Mass number 20
- e) Atomic number 10 f) No. of valence electrons 0