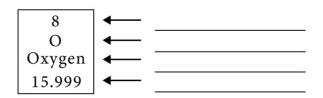
Name : ______ Date : ______

Atomic Structure Worksheet

(1) Identify the each of the parts of the box and fill in the blank.



Atomic number = ____ Atomic mass = # of protons = # of electrons =

of neutrons =

(2) How many protons and neutrons are present is an atom of titanium (Mass number = 48)?

Protons = _____

Neutrons =

(3) What is the mass number, symbol, and charge of an ion that contains 87 protons, 136 neutrons, and 86 electrons?

Mass number =

Symbol =

Charge =

(4) Write the complete name and chemical symbol for the ion with 37 protons, 48 neutrons, and 36 electrons.

(5) How many protons, neutrons, and electrons are present in the 93Nb+3 ion?

Protons = Electrons =

Neutrons =

(6) How many protons, neutrons, and electrons are present in the ¹⁴¹Ce⁺⁴ ion?

Protons =

Electrons =

Neutrons =

(7) An atom with an atomic number of 7 and a mass number of 14 is which element?

i) H

ii) N

iii) O

iv) P

(8) Usually, the atom described in Problem 7 will have how many electrons?

i) 4

ii) 7

iii) 8

iv) 15

(9) A neutral atom of copper has how many electrons?

i) 15

ii) 18

iii) 26

iv) 29

(10) What is the atomic mass in amu of an atom that has 14 protons, 14 electrons, and 14 neutrons?

i) 14

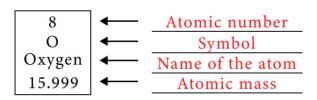
ii) 28

iii) 42 iv) 56

Atomic Structure Worksheet

Answers

(1) Identify the each of the parts of the box and fill in the blank.



Atomic number = 8
Atomic mass = 15.999 amu
of protons = 8
of electrons = 8
of neutrons = 8

2 How many protons and neutrons are present is an atom of titanium (Mass number = 48)?

Protons = 22

Neutrons = <u>26</u>

③ What is the mass number, symbol, and charge of an ion that contains 87 protons, 136 neutrons, and 86 electrons?

 $Mass number = \underline{223}$

Symbol = <u>Fr</u>

Charge = +1

Write the complete name and chemical symbol for the ion with 37 protons, 48 neutrons, and 36 electrons. Rubidium - 85 85 Rb+

(5) How many protons, neutrons, and electrons are present in the 93Nb+3 ion?

Protons = 41

Electrons = 38

Neutrons = 52

(6) How many protons, neutrons, and electrons are present in the 141Ce+4 ion?

 $Protons = \underline{58}$

Electrons = 54

Neutrons = 83

(7) An atom with an atomic number of 7 and a mass number of 14 is which element?

i) H

(ii) N

iii) O

iv) P

(8) Usually, the atom described in Problem 7 will have how many electrons?

i) 4

(ii) 7

iii) 8

iv) 15

(9) A neutral atom of copper has how many electrons?

i) 15

ii) 18

iii) 26

(iv) 29

10 What is the atomic mass in amu of an atom that has 14 protons, 14 electrons, and 14 neutrons?

i) 14

(ii) 28

iii) 42

iv) 56