

[Atomic Structure Worksheet]

- 1 How many protons and neutrons are present in an atom of calcium (Mass number = 40)?

Protons = _____ Neutrons = _____

- 2 How many protons and neutrons are present in an atom of krypton (Mass number = 84)?

Protons = _____ Neutrons = _____

- 3 What is the name, symbol, and charge of an ion that contains 12 protons and 10 electrons?

Name = _____ Symbol = _____ Charge = _____

- 4 What is the name, symbol, and charge of an ion that contains 15 protons and 18 electrons?

Name = _____ Symbol = _____ Charge = _____

- 5 A neutral atom has 85 protons and 125 neutrons. Show calculations wherever necessary.

- a What is its atomic number? _____
b What is its mass number? _____
c How many electrons does the atom have? _____
d What is the name of the atom? _____

- 6 Assuming all the atoms have neutral charge, complete the following table using your knowledge on atomic structure.

	Protons	Electrons	Neutrons	Mass number
Atom 1		8	8	
Atom 2			14	28
Atom 3	22			48
Atom 4		47		107
Atom 5		83	126	
Atom 6	87			223

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Answers

- 1] How many protons and neutrons are present in an atom of calcium (Mass number = 40)?

Protons = 20 Neutrons = 20

- 2] How many protons and neutrons are present in an atom of krypton (Mass number = 84)?

Protons = 36 Neutrons = 48

- 3] What is the name, symbol, and charge of an ion that contains 12 protons and 10 electrons?

Name = Magnesium Symbol = Mg Charge = +2

- 4] What is the name, symbol, and charge of an ion that contains 15 protons and 18 electrons?

Name = Phosphorous Symbol = P Charge = -3

- 5] A neutral atom has 85 protons and 125 neutrons. Show calculations wherever necessary.

- a] What is its atomic number? 85
b] What is its mass number? $85 + 125 = 210$
c] How many electrons does the atom have? 85
d] What is the name of the atom? Astatine

- 6] Assuming all the atoms have neutral charge, complete the following table using your knowledge on atomic structure.

	Protons	Electrons	Neutrons	Mass number
Atom 1	8	8	8	16
Atom 2	14	14	14	28
Atom 3	22	22	26	48
Atom 4	47	47	60	107
Atom 5	83	83	126	209
Atom 6	87	87	136	223