

Atomic Structure Practice Sheet

- ① Fill in the missing information about protons, neutrons, and electrons in the table below.

Particle	Charge	Mass	Location
Proton			
Neutron			
Electron			

- ② The _____ tells you the number of protons in one atom of the element. It also tells you the number of _____ in the neutral atom of that element. The atomic number gives the _____ of the element as well as its _____ on the Periodic Table.
- ③ The _____ is used to calculate the number of protons, neutrons, and electrons in one atom of an element. In order to calculate the number of neutrons, you must subtract _____ from the _____.
- ④ How many protons and neutrons are present in an atom of tin (Mass number = 119)?
Protons = _____ Neutrons = _____
- ⑤ How many protons and neutrons are present in an atom of tungsten (Mass number = 184)?
Protons = _____ Neutrons = _____
- ⑥ What is the name, symbol, and charge of an ion that contains 35 protons, 45 neutrons, and 36 electrons?
Name = _____ Symbol = _____ Charge = _____
- ⑦ What is the name, symbol, and charge of an atom that contains 19 protons, 20 neutrons, and 19 electrons?
Name = _____ Symbol = _____ Charge = _____
- ⑧ What is an ion? What does the number next to an ion signify?

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Answers

- ① Fill in the missing information about protons, neutrons, and electrons in the table below.

Particle	Charge	Mass	Location
Proton	+1	1 amu	Nucleus
Neutron	0	1 amu	Nucleus
Electron	-1	0	Electron cloud

- ② The atomic number tells you the number of protons in one atom of the element. It also tells you the number of electrons in the neutral atom of that element. The atomic number gives the identity of the element as well as its location on the Periodic Table.
- ③ The mass number is used to calculate the number of protons, neutrons, and electrons in one atom of an element. In order to calculate the number of neutrons, you must subtract atomic number from the mass number.
- ④ How many protons and neutrons are present in an atom of tin (Mass number = 119)?
- Protons = 50 Neutrons = 69
- ⑤ How many protons and neutrons are present in an atom of tungsten (Mass number = 184)?
- Protons = 74 Neutrons = 110
- ⑥ What is the name, symbol, and charge of an ion that contains 35 protons, 45 neutrons, and 36 electrons?
- Name = Bromine Symbol = Br Charge = -1
- ⑦ What is the name, symbol, and charge of an atom that contains 19 protons, 20 neutrons, and 19 electrons?
- Name = Potassium Symbol = K Charge = 0
- ⑧ What is an ion? What does the number next to an ion signify?

Charged particle. The number signifies the charge of the atom. + for positive and - for negative.