

Answers to Periodic Table and Simple Ionic Compounds

1. Complete the following Table:

Symbol	atomic no.	mass no.	no. of protons	no. of neutrons	no. of electrons	net charge
${}_{16}^{34}\text{Se}^{2-}$	16	34	16	18	18	-2
${}_{23}^{51}\text{V}^{3+}$	23	51	23	28	20	+3
${}_{20}^{40}\text{Ca}^{2+}$	20	40	20	20	18	+2

2. Would you expect each of the following atoms to gain or lose electrons when forming ions? What ion is the most likely in each case?

- K should lose one electron to form K^+
- F should gain one electron to form F^-
- Ca should lose two electrons to form Ca^{2+}

3. Fill in the following table:

Name	Symbol	Group	Period	Metal, nonmetal or metalloid?	transition metal or main group?
sodium	Na	1	3	metal	main group
iron	Fe	8	4	metal	transition metal
oxygen	O	16	2	nonmetal	main group

4. Give the formulas for the ionic compounds made of the following ions:

- ScBr_3
- K_2O
- CaI_2
- Cr_2S_3
- RbF
- MgO
- K_3N
- SrF_2
- Al_2S_3