

Review Exercise 3 - Answers



1. Fill in the blanks in the following chart. The first question is done for you as an example:

Atom or Ion Name	Symbol	Number of Protons	Number of Electrons	Number of Electrons Lost or Gained	Inert Gas Whose Electron Population is Like this Particle
e.g. fluoride	F ⁻	9	10	gained one	Neon
1. Iodide ion	I ⁻	53	54	gained one	Xenon
2. Sulfide ion	S ²⁻	16	18	gained two	Argon
3. Potassium ion	K ⁺	19	18	lost one	Argon
4. Calcium ion	Ca ²⁺	20	18	lost two	Argon
5. Bromide ion	Br ⁻	35	36	gained one	Krypton
6. Strontium ion	Sr ²⁺	38	36	lost two	Krypton
7. Hydrogen ion	H ⁺	1	0	lost one	There isn't one
8. Oxide ion	O ²⁻	8	10	gained two	Neon
9. Magnesium ion	Mg ²⁺	12	10	lost two	Neon
10. Aluminum ion	Al ³⁺	13	10	lost 3	Neon
11. Selenide ion	Se ²⁻	34	36	gained two	Krypton
12. Hydride ion	H ⁻	1	2	gained one	Helium
13. Lithium ion	Li ⁺	3	2	lost one	Helium
14. Rubidium ion	Rb ⁺	37	36	lost one	Krypton
15. Chloride ion	Cl ⁻	17	18	gained one	Argon

2. Give the number of protons and electrons in the Sc^{3+} ion.

Protons = 21

Electrons = 18

3. What is the symbol for an ion which has

a) 10 electrons and 7 protons? **(Nitrogen - N^{3-})**

b) 10 electrons and 12 protons **(Magnesium - Mg^{2+})**

4. Technetium is an element used in brain scanning.

99

Tc

43

How many

a) protons are present in the nucleus? **(43 protons)**

b) neutrons are present in the nucleus? **(56 neutrons)**

c) electrons are in a neutral Tc atom? **(43 electrons)**

d) electrons and protons are in a Tc^{3+} ion? **(40 electrons and 43 protons)**