

—○ Protons, Neutrons, and Electrons Worksheets ○—

1. Where are protons located in an atom, and what is their charge?
2. Where are neutrons located in an atom, and what is their charge?
3. Where are electrons located in an atom, and what is their charge?
4. For each **element**, fill in the missing information.

Name	Symbol	Atomic #	Mass #	# of Protons	# of Neutrons	# of Electrons
Selenium					45	
			222	86		
					118	79
		11			12	

5. For each **ion**, fill in the missing information.

Name	Symbol	Atomic #	Mass #	# of Protons	# of Neutrons	# of Electrons	Cation or anion?
	Al ⁺³				14		
Iron ion			56			24	
				15	16	18	
	F ⁻¹		19				

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Answers

1. Where are protons located in an atom, and what is their charge?

Protons are located in the nucleus of an atom and have a positive charge.

2. Where are neutrons located in an atom, and what is their charge?

Neutrons are also located in an atom's nucleus and have no charge (neutral).

3. Where are electrons located in an atom, and what is their charge?

Electrons are located outside the nucleus in electron shells and have a negative charge.

4.

Name	Symbol	Atomic #	Mass #	# of Protons	# of Neutrons	# of Electrons
Selenium	Se	34	79	34	45	34
Radon	Rn	86	222	86	136	86
Gold	Au	79	197	79	118	79
Sodium	Na	11	23	11	12	11

5.

Name	Symbol	Atomic #	Mass #	# of Protons	# of Neutrons	# of Electrons	Cation or anion?
Aluminum ion	Al ⁺³	13	27	13	14	10	Cation
Iron ion	Fe ²⁺	26	56	26	30	24	Cation
Phosphorous ion	P ³⁻	15	31	15	16	18	Anion
Fluoride ion	F ⁻¹	9	19	9	10	10	Anion