

Protons, Neutrons, and Electrons Practice Worksheet

1. What is the atomic number of an element, and what does it represent?
2. How can you calculate the number of neutrons in an atom of an element?
3. Fill in the numbers of protons, neutrons, and electrons for the given nuclides:

	Number of Protons	Number of Neutrons	Number of Electrons
${}^{15}_7\text{N}$			
Carbon - 14			
Carbon - 14			
${}^{31}_{15}\text{P}$			

4. Assuming only neutral atoms, complete the following table by filling in the missing information:

Atomic Symbol	Hyphenated Symbol	Atomic Number	Atomic Mass	# of Protons	# of Neutrons	# of Electrons
${}^{222}_{86}\text{Rn}$						
	Cobalt - 60					
				80	117	
			90	38		
			40		21	19
		34	79			

Protons, Neutrons, and Electrons Practice Worksheet

Answers

1. What is the atomic number of an element, and what does it represent?

The atomic number of an element is the number of protons in the nucleus of its atoms. It represents the element's identity and determines its place on the periodic table.

2. How can you calculate the number of neutrons in an atom of an element?

You can calculate the number of neutrons in an atom by subtracting the atomic number (number of protons) from the mass number (total number of protons and neutrons).

3.

	Number of Protons	Number of Neutrons	Number of Electrons
${}_{7}^{15}\text{N}$	7	8	7
Carbon - 14	6	8	6
Carbon - 14	1	2	1
${}_{15}^{31}\text{P}$	15	16	15

4.

Atomic Symbol	Hyphenated Symbol	Atomic Number	Atomic Mass	# of Protons	# of Neutrons	# of Electrons
${}_{86}^{222}\text{Rn}$	Radon - 222	86	222	86	136	86
${}_{27}^{60}\text{Co}$	Cobalt - 60	27	60	27	33	27
${}_{80}^{197}\text{Hg}$	Mercury - 197	80	197	80	117	80
${}_{38}^{90}\text{Sr}$	Strontium - 90	38	90	38	52	38
${}_{19}^{40}\text{K}$	Potassium - 40	19	40	19	21	19
${}_{34}^{79}\text{Se}$	Selenium - 79	34	79	34	45	34