

Atomic Basics

Atomic Structure Worksheet

1. Can you always determine what an element is if you knew only one of the following?

- (a) Number of Protons _____
- (b) Number of Neutrons _____
- (c) Number of Electrons (in a neutral atom) _____
- (d) Number of Electrons (in general) _____

2. Identify the element based on the number of particles given below:

- (a) 0 neutrons _____
- (b) 26 protons and 29 neutrons _____
- (c) 20 protons _____
- (d) 53 protons and 74 neutrons _____
- (e) 86 electrons and 125 neutrons _____

3. Fill the table with the correct information.

Element	Symbol	Number of Nucleons (Neutrons + Protons)
Potassium		
Iron		
Gold		
Sulfur		
Iodine		

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1. **Answers**
- (a) Number of Protons Yes
- (b) Number of Neutrons No
- (c) Number of Electrons (in a neutral atom) Yes
- (d) Number of Electrons (in general) No

- 2.
- (a) 0 neutrons H
- (b) 26 protons and 29 neutrons Fe
- (c) 20 protons Ca
- (d) 53 protons and 74 neutrons I
- (e) 86 electrons and 125 neutrons Pb

3.

Element	Symbol	Number of Nucleons (Neutrons + Protons)
Potassium	K	39 (20 + 19)
Iron	Fe	56 (30 + 26)
Gold	Au	197 (118 + 79)
Sulfur	S	32 (16 + 16)
Iodine	I	127 (74 + 53)