

Name: _____

Chem4Bio Module 2 Worksheet

1. Circle **all** of the states of matter to which each statement applies:

Rigid	Solids	Liquids	Gases
No fixed shape	Solids	Liquids	Gases
Fixed volume	Solids	Liquids	Gases

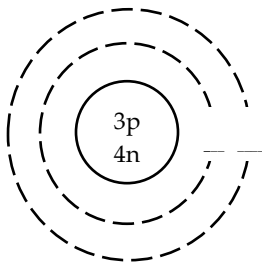
2. Match the subatomic particle to its correct charge:

Proton	Neutral/no charge
Neutron	Negative
Electron	Positive

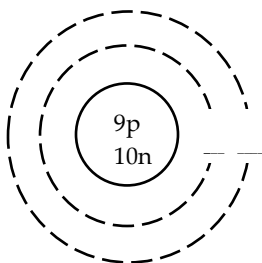
3. **Fill in the table below**, assuming neutral atoms. Complete the entire isotopic symbol, including mass number.

Symbol	Atomic number	Mass number	# of protons	# of neutrons	# of electrons	# of valence electrons
¹³⁸ Ba						
Br				45		
		114			49	

4. Complete the diagram of the lithium atom by indicating how many electrons are in each shell.



5. Complete the diagram of the fluorine atom by indicating how many electrons are in each shell.

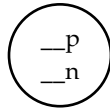


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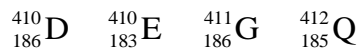
6. How many electron shells will the aluminum atom have?

7. How many electrons will each electron shell of the aluminum atom have? (List by shell)

8. Diagram the complete structure of the argon atom, atomic number 18 and mass number 40. Include the proper number of subatomic particles and correctly assign electrons to their shells.



9. On the planet *Tatooine*, neutral atoms **D**, **E**, **G**, and **Q** have the following atomic compositions:



- a) Which two atoms are isotopes? _____
- b) Which two atoms have the same mass number? _____
- c) Which two atoms have the same number of neutrons? _____