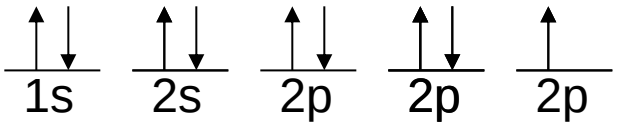
Name:_____

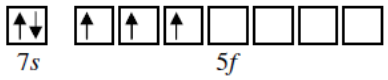
Orbital Configuration Practice

Fill-in the table below with the requested information using the following example as a guide:

F 

Element	Element Symbol	Total Number of Electrons	Orbital Diagram
Lithium			
Oxygen			
Calcium			
Phosphorus			
Potassium			
Chlorine			
Hydrogen			
Copper			
Neon			
Nitrogen			
Sodium			
Bromine			

Fill-in the table below with the requested information using the following example as a guide:

[Rn] 

Element	Element Symbol	Total Number of Electrons	Abbreviated Orbital Diagram
Helium			
Nitrogen			
Chlorine			
Iron			
Zinc			
Barium			
Bromine			
Magnesium			
Fluorine			
Aluminum			
Silver			
Sulfur			
Argon			

Write the name and symbol for the elements with the following orbital diagrams

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

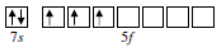
1. 

2. 

3. 

4. 

5. [Kr] 

6. [Rn] 

There is an error with each of the following orbital diagrams. Explain the error.

7. [Ar] 	8. 

Answer the following questions

9. Explain Aufbau's Principle:

10. Explain Hund's Rule:

11. Explain Pauli's Exclusion Principle:

12. What is a ground state?

13. How do electrons reach an excited state?

14. What happens when electrons in the excited state fall back to their ground state?

15. Why do different elements emit different colored light when stuck in the flame during the flame test?

16. What is the electromagnetic spectrum?

17. What color of visible light has the lowest energy? _____
18. What color of visible light has the highest energy? _____
19. A photon of orange light has _____(more or less) energy than a photon of yellow light.