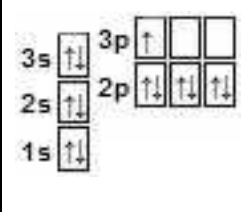
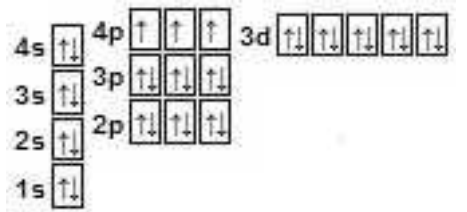
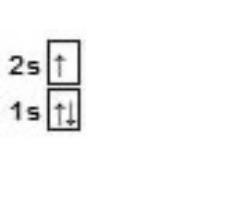
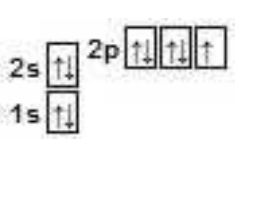


ELECTRON CONFIGURATION PRACTICE

Determine the element name given the orbital filling diagram:

			
1)	2)	3)	4)

Determine the element name given the electron configuration:

- | | |
|---|---------------------------------|
| _____ 5) $1s^2 2s^2 2p^6 3s^2 3p^3$ | _____ 8) $1s^2 2s^2 2p^5$ |
| _____ 6) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^3$ | _____ 9) $1s^2 2s^2 2p^1$ |
| _____ 7) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$ | _____ 10) $1s^2 2s^2 2p^6 3s^2$ |

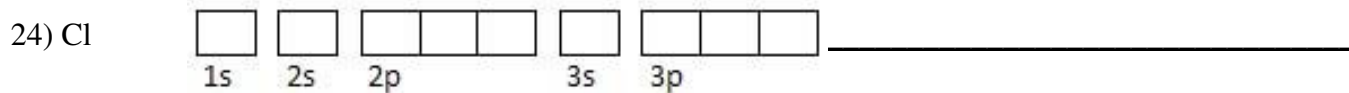
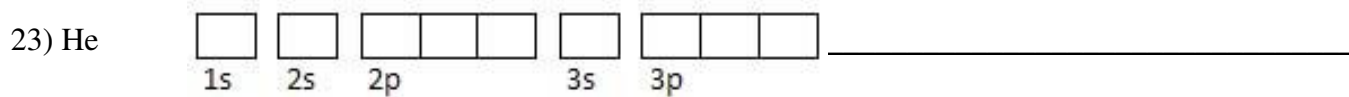
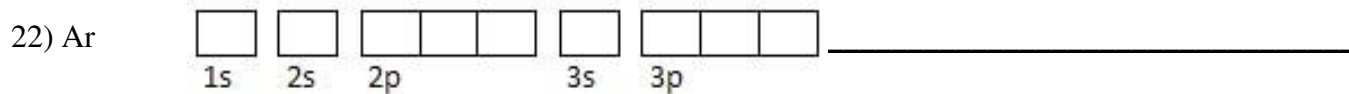
Determine the element name given the shorthand electron configuration:

- | | |
|--|--|
| _____ 11) $[\text{Kr}]5s^2 4d^{10} 5p^5$ | _____ 12) $[\text{Ne}]3s^2 3p^4$ |
| _____ 13) $[\text{Ar}]4s^2$ | _____ 14) $[\text{Kr}]5s^2 4d^{10} 5p^3$ |
| _____ 15) $[\text{He}]2s^2 2p^4$ | _____ 16) $[\text{He}]2s^1$ |

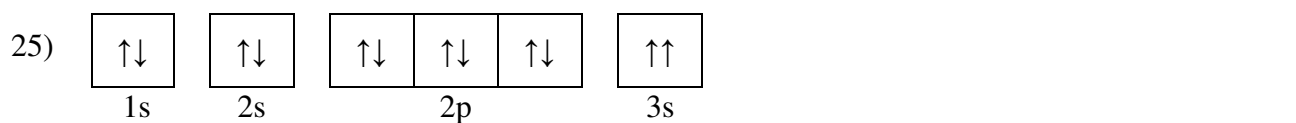
Complete the orbital filling diagrams below and determine the electron configuration of the following elements:

Element:	Orbital Filling Diagram:	Electron Configuration:																		
17) Li	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">1s</td> <td style="text-align: center;">2s</td> <td style="text-align: center;">2p</td> <td style="text-align: center;">3s</td> <td style="text-align: center;">3p</td> <td colspan="4"></td> </tr> </table>										1s	2s	2p	3s	3p					_____
1s	2s	2p	3s	3p																
18) Mg	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">1s</td> <td style="text-align: center;">2s</td> <td style="text-align: center;">2p</td> <td style="text-align: center;">3s</td> <td style="text-align: center;">3p</td> <td colspan="4"></td> </tr> </table>										1s	2s	2p	3s	3p					_____
1s	2s	2p	3s	3p																
19) Al	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">1s</td> <td style="text-align: center;">2s</td> <td style="text-align: center;">2p</td> <td style="text-align: center;">3s</td> <td style="text-align: center;">3p</td> <td colspan="4"></td> </tr> </table>										1s	2s	2p	3s	3p					_____
1s	2s	2p	3s	3p																
20) S	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">1s</td> <td style="text-align: center;">2s</td> <td style="text-align: center;">2p</td> <td style="text-align: center;">3s</td> <td style="text-align: center;">3p</td> <td colspan="4"></td> </tr> </table>										1s	2s	2p	3s	3p					_____
1s	2s	2p	3s	3p																
21) N	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">1s</td> <td style="text-align: center;">2s</td> <td style="text-align: center;">2p</td> <td style="text-align: center;">3s</td> <td style="text-align: center;">3p</td> <td colspan="4"></td> </tr> </table>										1s	2s	2p	3s	3p					_____
1s	2s	2p	3s	3p																

Name: _____ Date: _____ Period: ____ #: ____



Which guideline, Aufbau's principle, Hund's rule, or Pauli's exclusion principle, is violated in the following orbital diagrams?



Write the electron configuration of the following elements.

27) Fe _____

28) Sb _____

29) Ba _____

Write the electron configuration of the following elements using noble gas notation (short-cut).

30) U _____

31) Po _____

32) Fr _____