

Name: _____

Block: _____

Electron Configurations

Give the electron configuration (orbital notation—with the arrows) for each of the following elements:

1. carbon

2. potassium

3. silicon

4. silver

For each of the following electron configurations, name the element.

5. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2s} \quad \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \frac{\uparrow}{2p}$

6. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2s} \quad \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \quad \frac{\uparrow\downarrow}{3s} \quad \frac{\uparrow\downarrow}{3p} \frac{\uparrow\downarrow}{3p} \frac{\uparrow\downarrow}{3p} \quad \frac{\uparrow\downarrow}{4s} \quad \frac{\uparrow\downarrow}{3d} \frac{\uparrow\downarrow}{3d} \frac{\uparrow\downarrow}{3d} \frac{\uparrow}{3d} \frac{\uparrow}{3d}$

Each of the following electron configurations has something wrong with it. For each one:

- State what the mistake is.
- Re-write the electron configuration correctly, keeping the total number of electrons the same.

7. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2p} \frac{1}{2p} \quad 1$

8. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2s} \quad \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p}$

9. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2s} \quad \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \quad \frac{\uparrow\downarrow}{3s} \quad \frac{\uparrow\downarrow}{3p} \frac{\uparrow\downarrow}{3p} \text{ —}$

10. $\frac{\uparrow\downarrow}{1s} \quad \frac{\uparrow\downarrow}{2s} \quad \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \frac{\uparrow\downarrow}{2p} \quad \frac{\uparrow\downarrow}{3s} \quad \frac{\uparrow\downarrow}{3p} \frac{\uparrow\downarrow}{3p} \frac{\uparrow\downarrow}{3p} \quad \frac{\uparrow\downarrow}{4s} \quad \frac{1}{4d} \frac{1}{4d} \frac{1}{4d} \frac{1}{4d} \text{ —}$