

Electron Configuration Formative Quiz

A. Write the complete electron configurations of the following elements.

1. Samarium _____
2. Platinum _____
3. Barium _____
4. Tin _____
5. Molybdenum _____
6. Bohrium _____

B. Write the core electron configurations of the following elements:

1. Cobalt _____
2. Tellurium _____
3. Cesium _____
4. Californium _____

C. Determine what elements are denoted by the following electron configurations:

- _____ 1. $1s^2 2s^2 2p^6 3s^2 3p^4$
- _____ 2. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^8$
- _____ 3. $[\text{Kr}] 5s^2 4d^{10} 5p^1$
- _____ 4. $[\text{Xe}] 6s^2 5d^1 4f^6$
- _____ 5. $[\text{Rn}] 7s^2 5f^{14} 6d^2$

D. Draw an orbital box diagram for Polonium.

E. The first ionization energy of a sodium atom is 82.33×10^{-23} kJ. Calculate the wavelength of light in nm that is sufficient to ionize one sodium atom. **Show setups.**

Useful info: $c = 3.00 \times 10^{10}$ cm/sec; $h = 6.6262 \times 10^{-34}$ J·sec; $1\text{m} = 10^9$ nm
