Match each element or ion with its orbital notation:

Cl^{-1}

Ni^{+2}

Ni

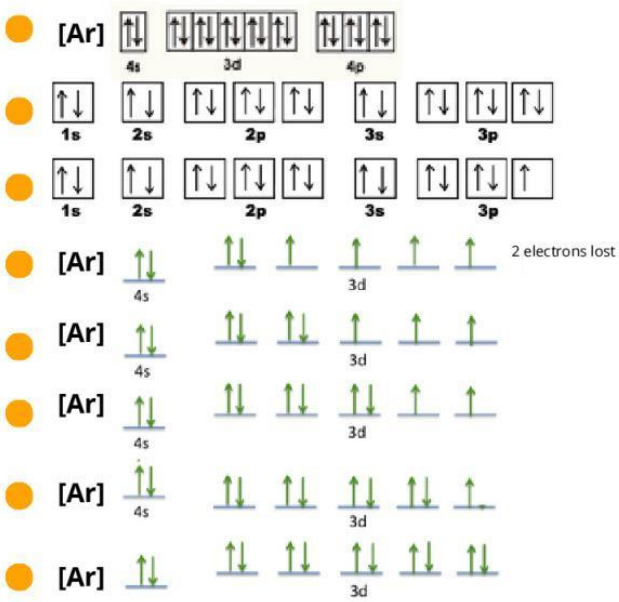
Zn

Co

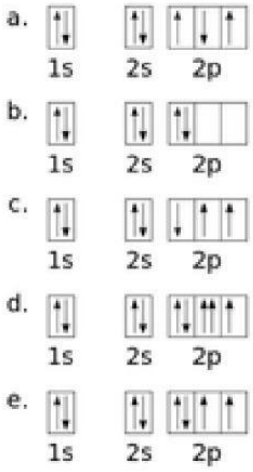
Cl

Kr

Cu



2. Choose the incorrect orbital notations



3. How many valence electrons are there on each of the following elements?

- Neon (Ne): $1s^2\ 2s^2\ 2p^6$
- Sodium (Na): $1s^2\ 2s^2\ 2p^6\ 3s^1$
- Chlorine (Cl): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^5$
- Calcium (Ca): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 4s^2$
- Phosphorus (P): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^3$
- Argon (Ar): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6$
- Sulfur (S): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^4$
- Rubidium (Rb): $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^1$
- Bismut (Bi): $[Xe]\ 6s^2\ 4f^{14}\ 5d^{10}\ 6p^3$

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