

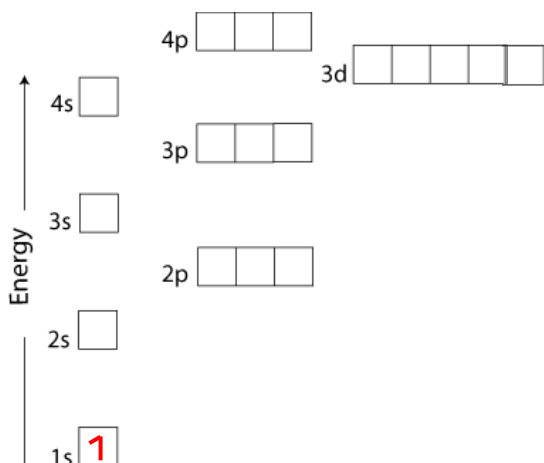
Electron Configuration

Worksheet-Answer Key

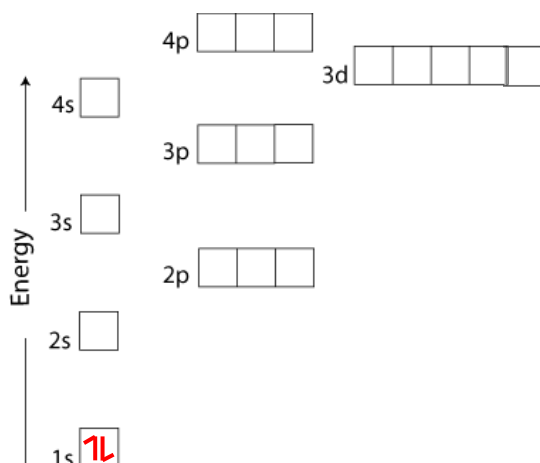
Name _____ Date _____

1. Provide Aufbau diagrams. There is a bigger diagram on the last page. **Bonus: Write out the electron configurations for elements 1-21.**

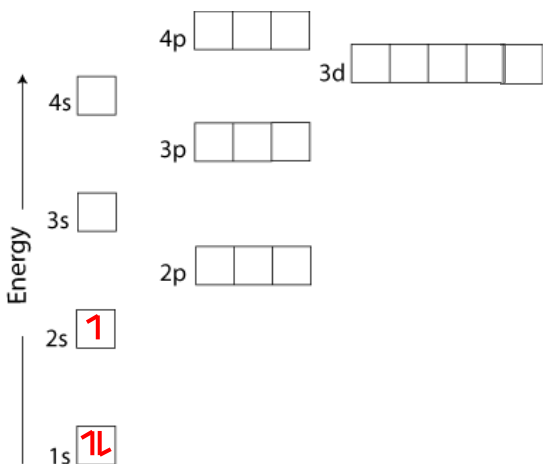
a) hydrogen (H)



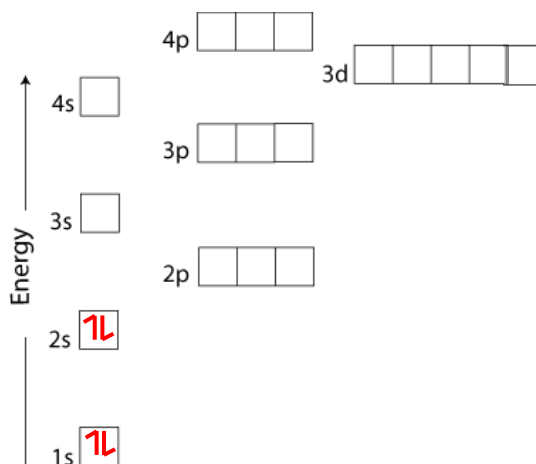
b) helium (He)



c) lithium (Li)



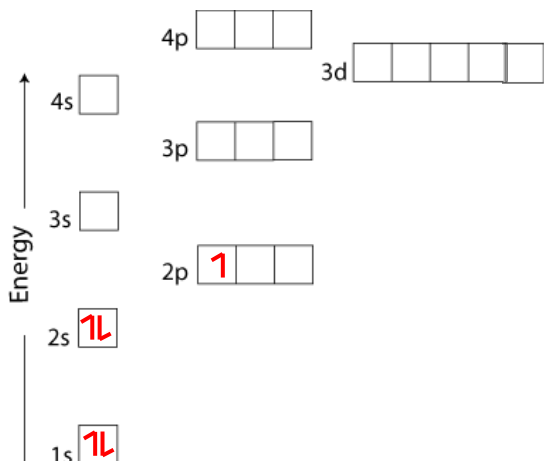
d) beryllium (Be)



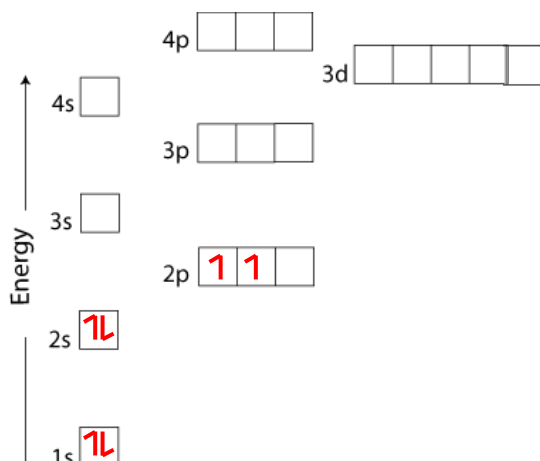
Electron Configuration

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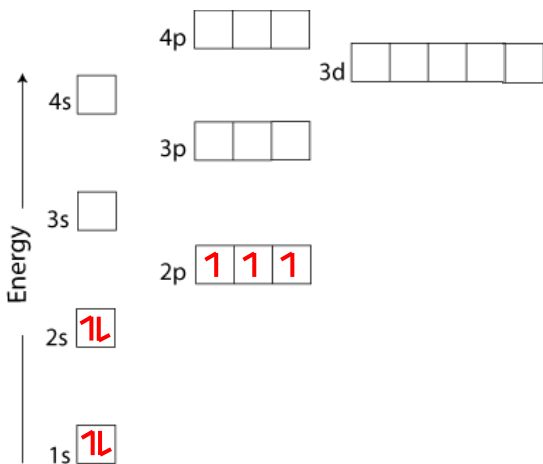
e) boron (B)



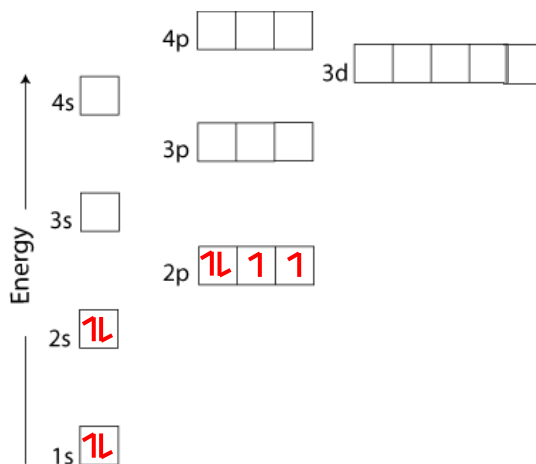
f) carbon (C)



g) nitrogen (N)



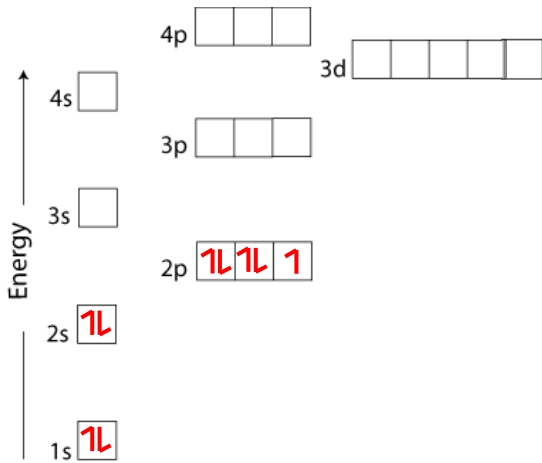
h) oxygen (O)



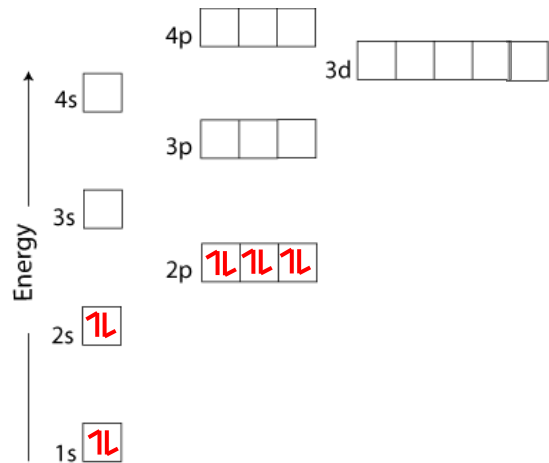
Electron Configuration

Worksheet-Answer Key

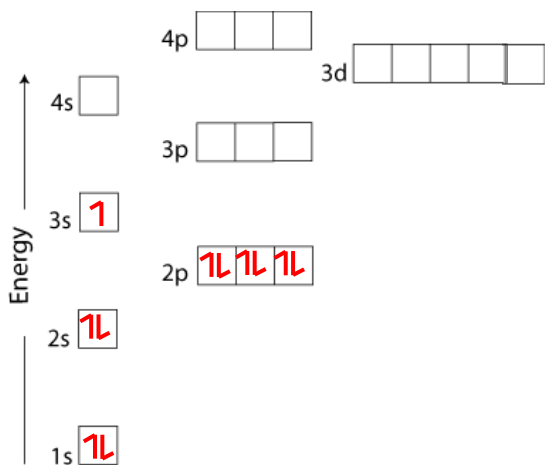
i) flourine (F)



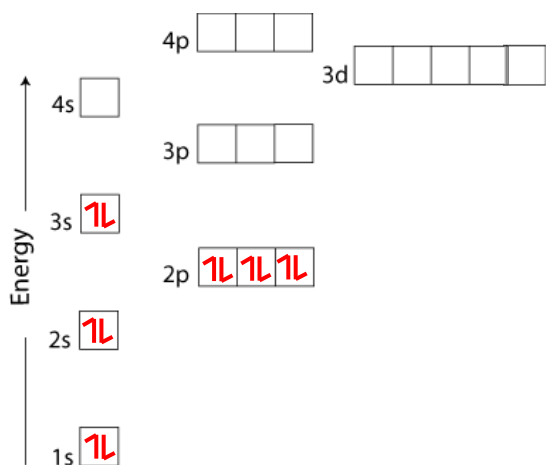
j) neon (Ne)



k) sodium (Na)



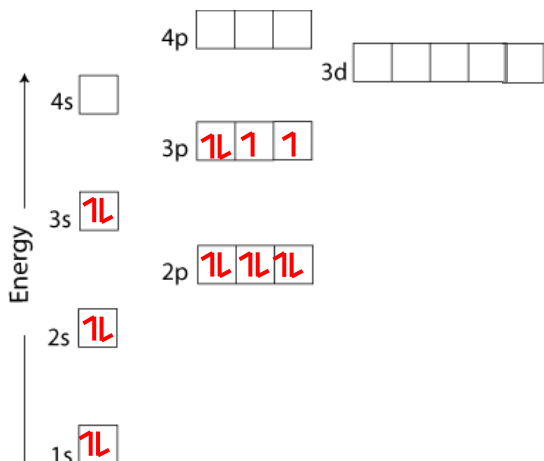
l) magnesium (Mg)



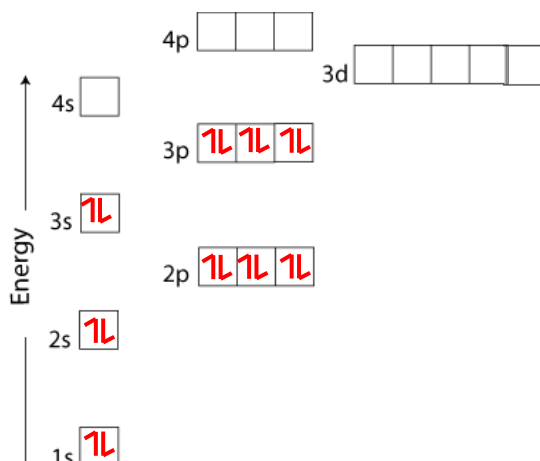
Electron Configuration

Worksheet-Answer Key

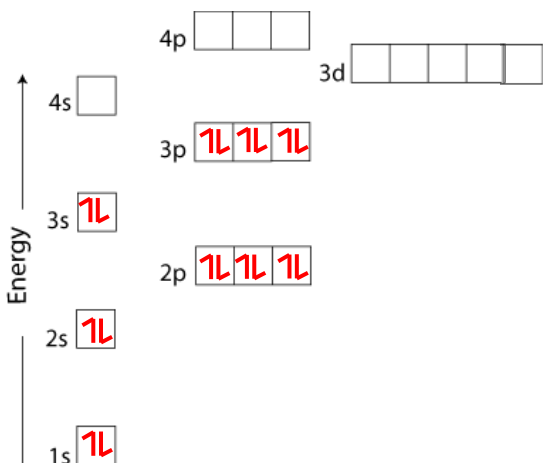
m) sulfur (S)



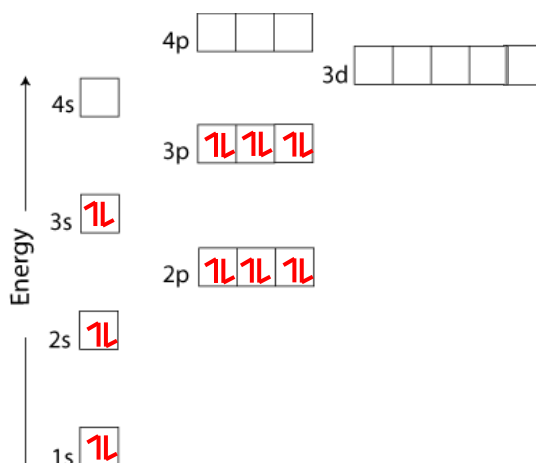
n) sulfide (S^{2-})



o) argon (Ar)



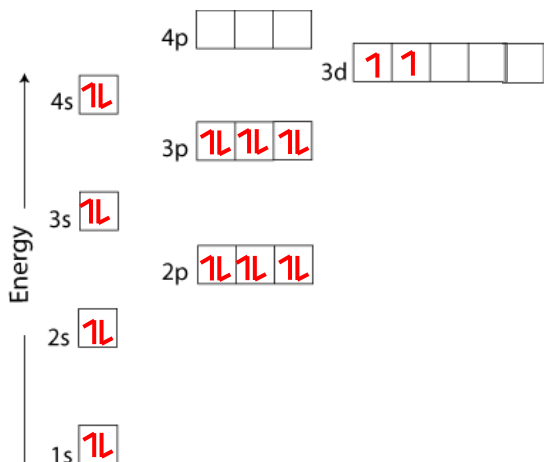
p) calcium ion (Ca^{2+})



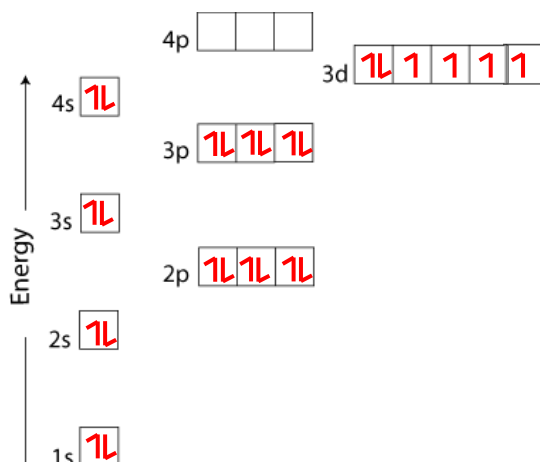
Electron Configuration

Worksheet-Answer Key

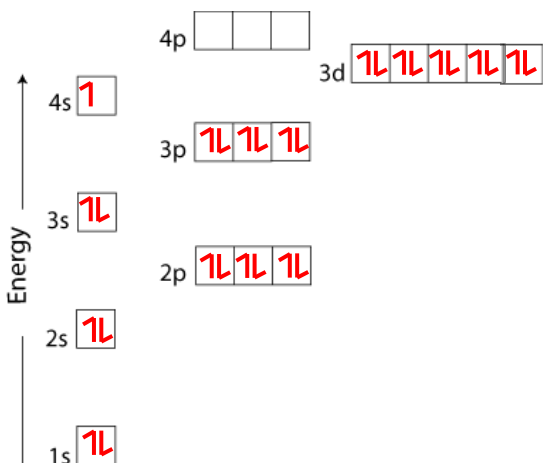
q) titanium (Ti)



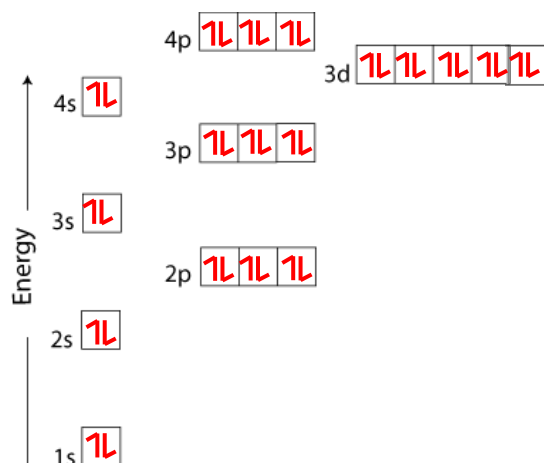
r) iron (Fe)



s) copper (Cu)



t) bromide (Br⁻)



Electron Configuration

Worksheet-Answer Key

Bonus: Write electron configurations for elements 1-21.

H $1s^1$

Mg $1s^2 2s^2 2p^6 3s^2$

He $1s^2$

Al $1s^2 2s^2 2p^6 3s^2 3p^1$

Li $1s^2 2s^1$

Si $1s^2 2s^2 2p^6 3s^2 3p^2$

Be $1s^2 2s^2$

P $1s^2 2s^2 2p^6 3s^2 3p^3$

B $1s^2 2s^2 2p^1$

S $1s^2 2s^2 2p^6 3s^2 3p^4$

C $1s^2 2s^2 2p^2$

Cl $1s^2 2s^2 2p^6 3s^2 3p^5$

N $1s^2 2s^2 2p^3$

Ar $1s^2 2s^2 2p^6 3s^2 3p^6$

O $1s^2 2s^2 2p^4$

K $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$

F $1s^2 2s^2 2p^5$

Ca $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$

Ne $1s^2 2s^2 2p^6$

Sc $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^1$ or $1s^2 2s^2 2p^6 3s^2 3p^6 3d^1 4s^2$

Na $1s^2 2s^2 2p^6 3s^1$

(3d fills after 4s)