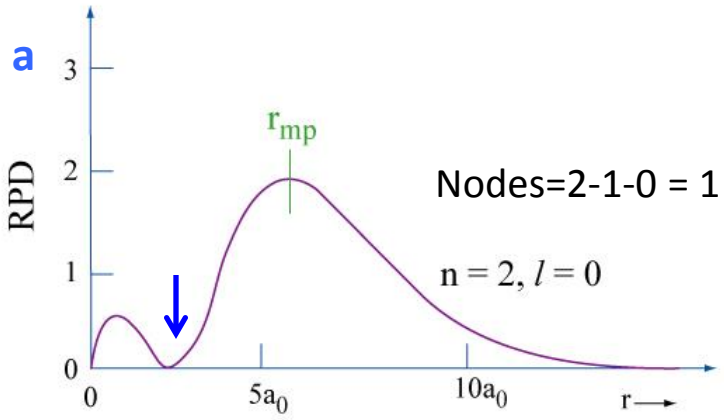
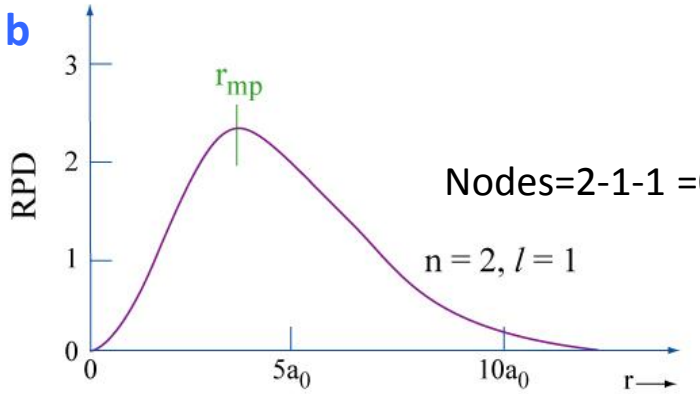
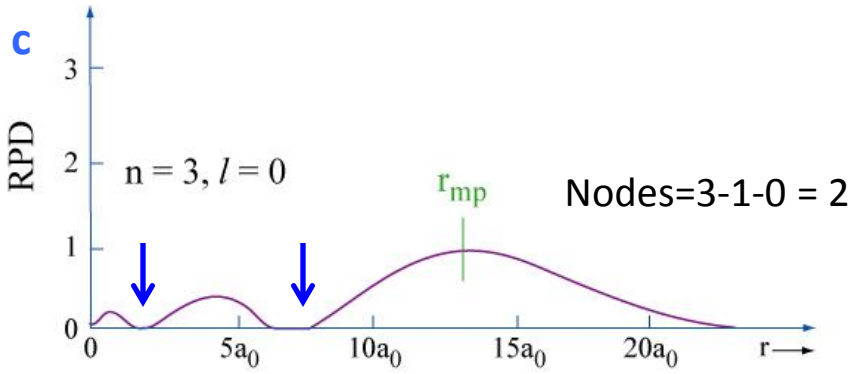
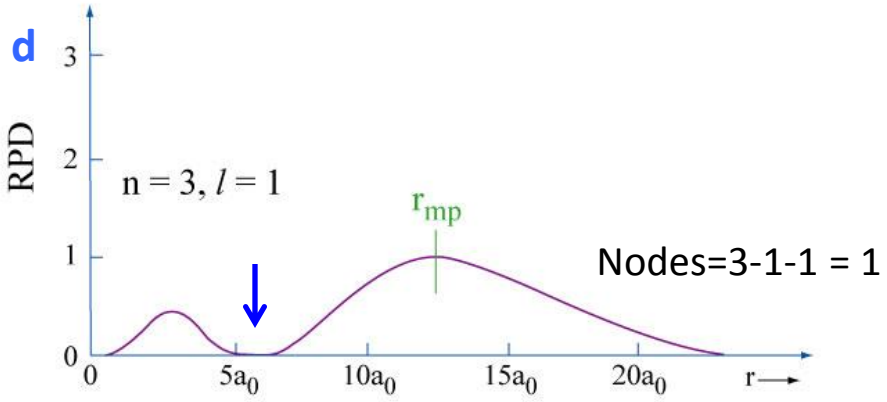
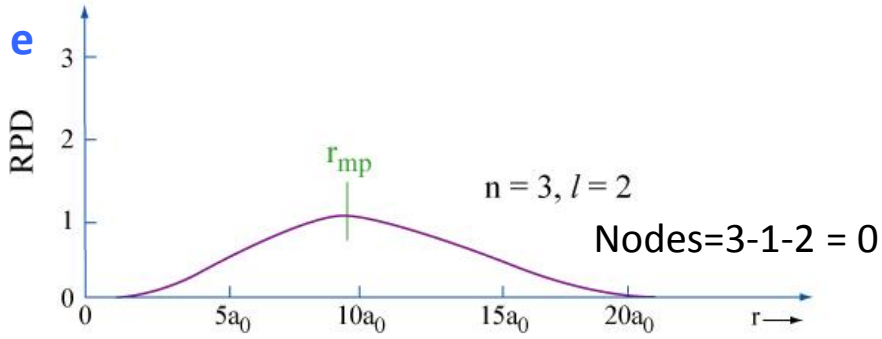










Which statement is correct?

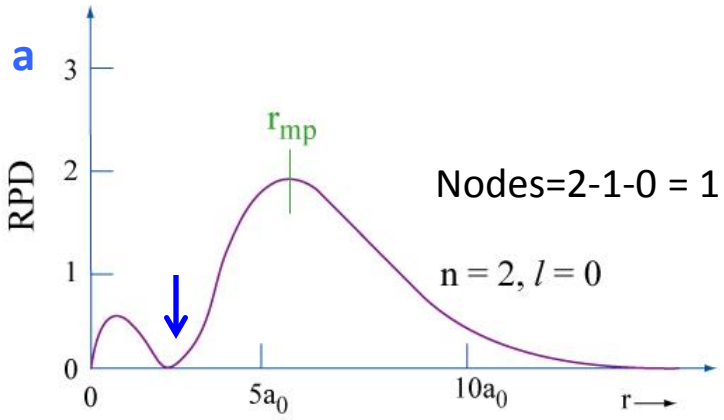
A. Plot a is for a 2s orbital

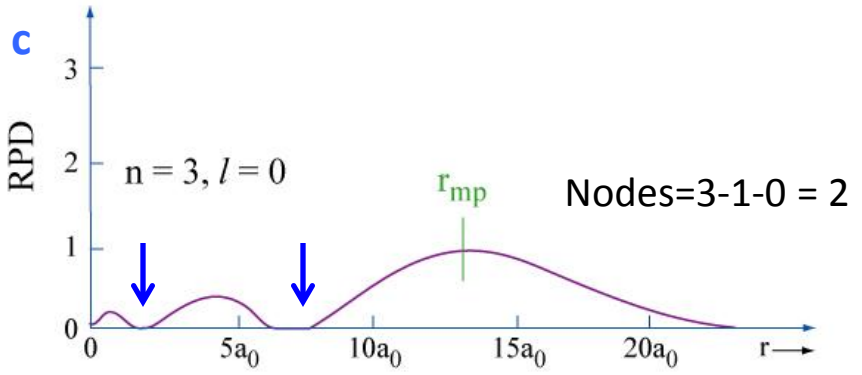
B. Plot b is for a 2s orbital

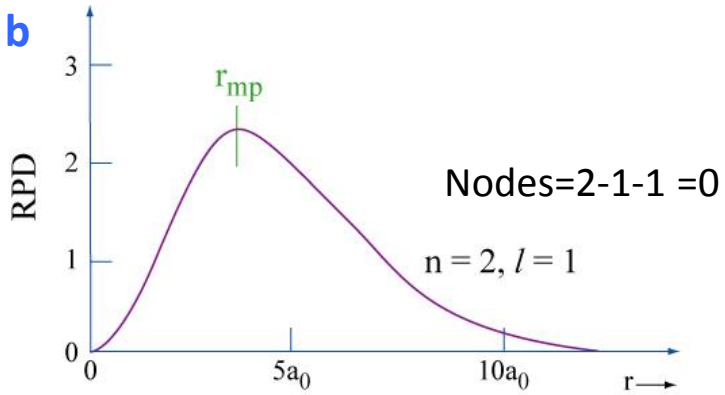
C. Plots **c-d** are for the 3px, 3py and 3pz

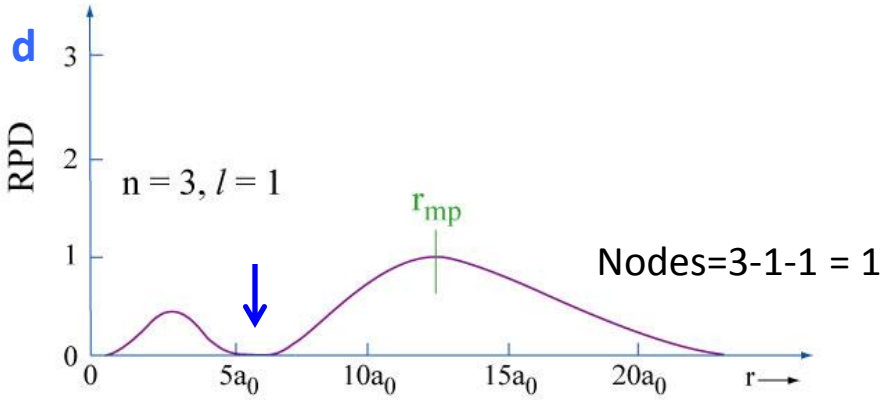
D. The type of nodes shown with the blue arrows are angular nodes.

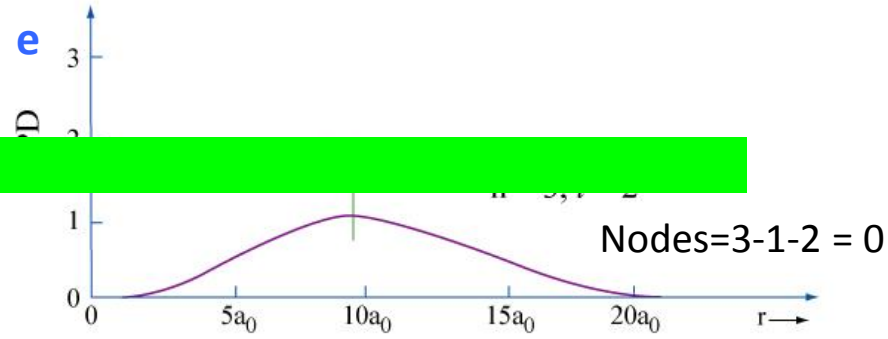
E. Not enough information is given to answer this question.











Which statement is correct?

81% A. Plot a is for a 2s orbital

12% B. Plot b is for a 2s orbital

3% C. Plots c-d are for the 3px, 3py and 3pz

2% D. The type of nodes shown with the blue arrows are angular nodes.

3% E. Not enough information is given to answer this question.

Which value(s) below is a **possible** Z_{eff} for the 2s electron in a Li (Z=3) atom?

1. $Z_{eff} = 0.39$
2. $Z_{eff} = 0.87$
3. $Z_{eff} = 1.42$
4. $Z_{eff} = 3.19$
5. Option 1 and 2
6. Option 1,2, and 3
7. Option 2 and 4

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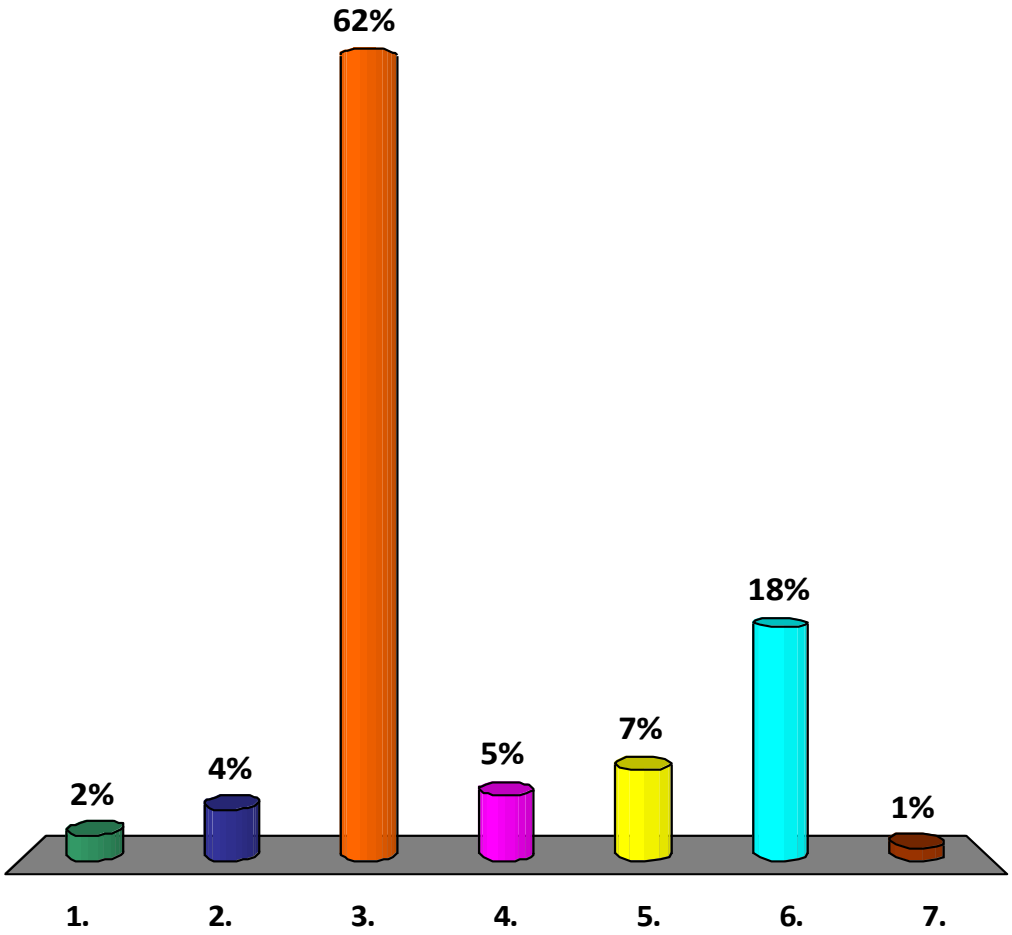
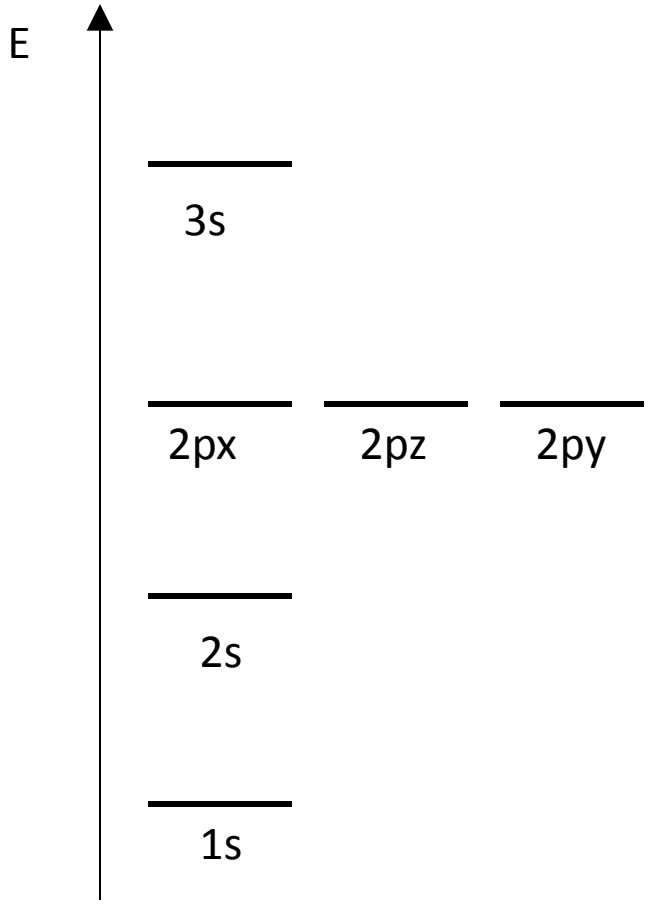


Identify the correct electron configuration for the carbon (Z = 6) atom.

1. $1s^2 2s^2 3s^2$
2. $1s^2 2s^2 2p_x^{\ 2}$
3. $1s^2 2s^2 2p_y^{\ 2}$
4. $1s^2 2s^2 2p_z^{\ 2}$
5. $1s^2 2s^2 2p_x^{\ 1} 2p_z^{\ 1}$
6. $1s^2 2s^2 2p_x^{\ 1} 2p_z^{\ 1} 2p_y^{\ 1}$



Identify the correct electron configuration for the carbon (Z = 6) atom.

1% 1. $1s^2 2s^2 3s^2$

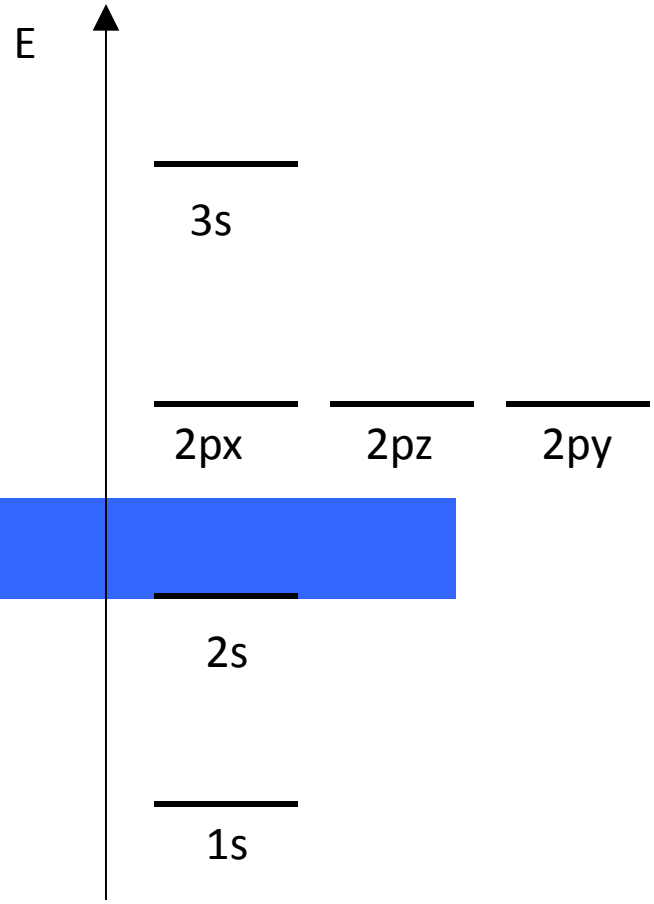
3% 2. $1s^2 2s^2 2p_x^{\ 2}$

1% 3. $1s^2 2s^2 2p_y^{\ 2}$

1% 4. $1s^2 2s^2 2p_z^{\ 2}$

90% 5. $1s^2 2s^2 2p_x^{\ 1} 2p_z^{\ 1}$

4% 6. $1s^2 2s^2 2p_x^{\ 1} 2p_z^{\ 1} 2p_y^{\ 1}$



Which element has the following electron configuration: $[Ar]4s^{1}3d^{10}$

1. Cu
2. Zn
3. Ga
4. Ag
5. Cd
6. In

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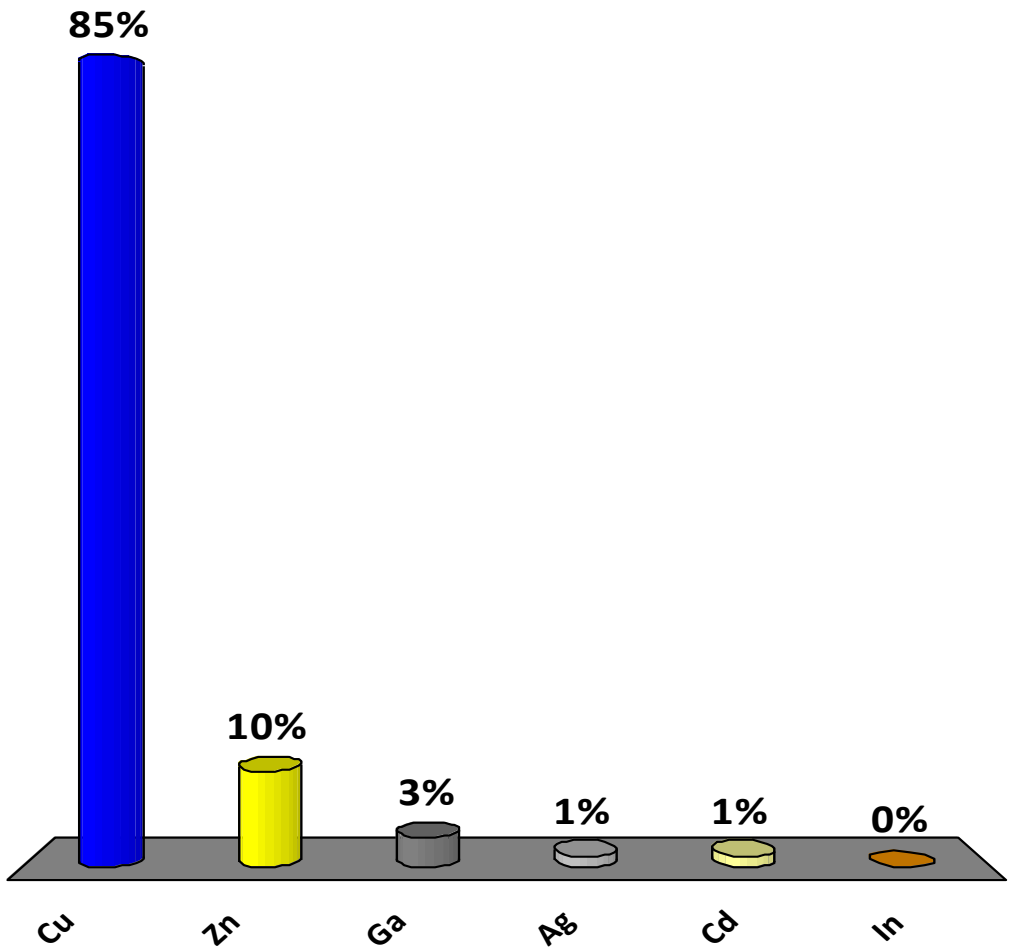

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Fall 2014

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