

Name _____

Chemistry, Period _____

Ions and Electron Configurations of Ions

1. How many valence electrons are in the following elements?

a. Li _____

f. Si _____

b. Br _____

g. Ne _____

c. N _____

h. O _____

d. Ba _____

i. He _____

e. Kr _____

j. Sn _____

2. How many core electrons in the following atoms?

a. O _____

b. Cl _____

c. Ca _____

3. What would be the most likely charge on the following atoms if they lost or gained electrons and became ions?

a. Li _____

g. Ne _____

b. Br _____

h. O _____

c. N _____

i. Al _____

d. Ba _____

j. Zn _____

e. I _____

k. Ag _____

f. Si _____

4. Provide full electron configurations for the following ions.

a. Mg^{+2} _____

Which **atom** is it isoelectronic with? _____

Which **ions** could it be isoelectronic with? _____

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b. P^{-3} _____

Which **atom** is it isoelectronic with? _____

Which **ions** could it be isoelectronic with? _____

c. O^{-2} _____

Which **atom** is it isoelectronic with? _____

Which **ions** could it be isoelectronic with? _____

d. Ba^{+2} _____

Which **atom** is it isoelectronic with? _____

Which **ions** could it be isoelectronic with? _____

e. Se^{-2} _____

Which **atom** is it isoelectronic with? _____

Which **ions** could it be isoelectronic with? _____

5. Provide core notation electron configurations for the following ions.

a. V^{+3} _____

b. Fe^{+3} _____

c. Cu^{+1} _____

d. Mn^{+4} _____