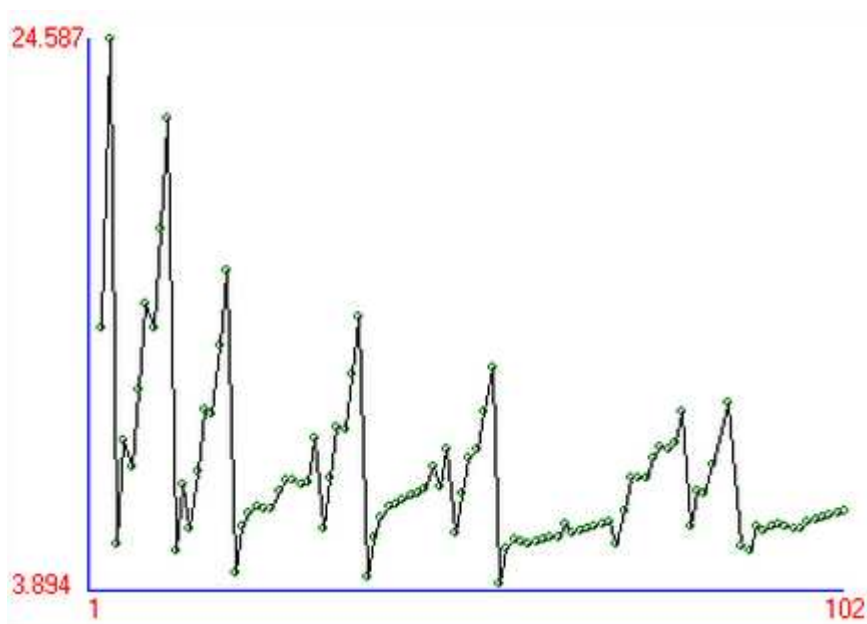


STE Pretest 1.3 for 2015

1. What atom of period 2 has the largest atomic radius?
2. What's the difference between ionization energy and electronegativity?
3. If the difference between electronegativities of two atoms is small, will they react to form a covalent compound? Or an ionic compound?

4.



Which periodic trend is shown above, if each peak corresponds to a noble gas?

5. What makes K a bigger atom than sodium?
6. Name the following compounds:
 - a) OF_2 _____
 - b) KBr _____
 - c) Ca_3P_2 _____
 - d) BeCO_3 _____
 - e) MgSO_4 _____
 - f) CuS _____
 - g) OsO_4 _____
 - h) NH_4I _____
 - i) CF_4 _____
 - j) $\text{Fe}(\text{HCO}_3)_2$ _____

7. Write formulae for the following ionic compounds. (Show work when necessary)

- a) sodium hydride
- b) magnesium nitrate
- c) calcium carbonate
- d) ammonium chlorate
- e) diphosphorus pentaselenide

8. Match the following descriptions with the correct polyatomic ion. (It has to be one of the eight in your notes. Include charge!)

a) Found in *guano* and other natural fertilizer, it is needed by plants for the production of amino acids (hint: these contain nitrogen). _____



b) It'll either knock you out or wake you up with its ammonia-like smell _____

c) Bakers use this to generate carbon dioxide to help puff up their goodies _____



d) Get this Cl-containing stuff on your jeans and they'll fade in a hurry! _____

9. What is the charge of CrO_4 in CaCrO_4 ?

10. There are three isotopes of Q: 312, 316 and 317. The most abundant one is 312. 75% of Q is ^{312}Q . If the atomic mass of Q is 313.16, what is the percentage abundance of ^{316}Q ?

^{24}Mg 78.99%

^{25}Mg 10.00%

^{26}Mg 11.01%

11. Use the above abundances to find the atomic mass of magnesium.