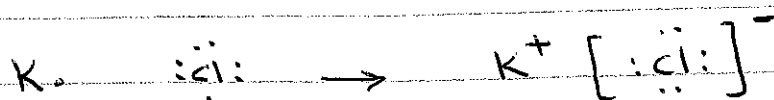
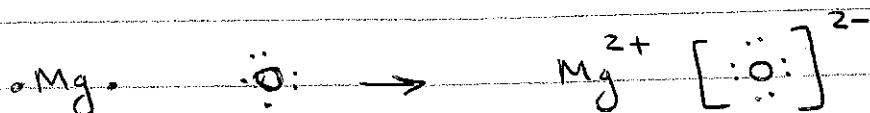


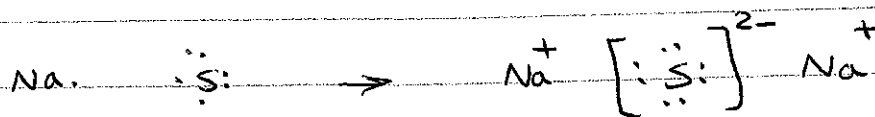
43) Write the Lewis structure of the compound KCl.



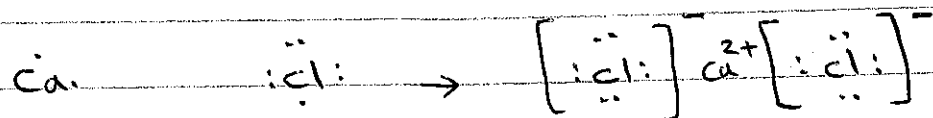
44) Write the Lewis structure of the compound MgO.



45) Write the Lewis structure for  $\text{Na}_2\text{S}$ .



46) Write the Lewis structure for  $\text{CaCl}_2$ .



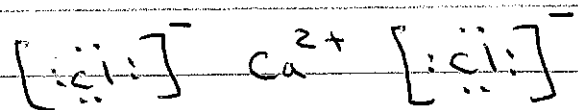
47) Use the Lewis model to predict the formula of the compound that forms between calcium and chlorine.

- Draw the Lewis structures of calcium and chlorine by drawing two dots around the symbol for calcium and seven dots around the symbol for chlorine.



- Calcium must lose its 2 valence electrons (to effectively attain an octet in its previous principal shell), while chlorine needs to gain only 1 electron to obtain an octet.

consequently, the compound that forms between Ca and Cl has two chlorine atoms to every one calcium atom.



The formula is therefore  $\text{CaCl}_2$ .

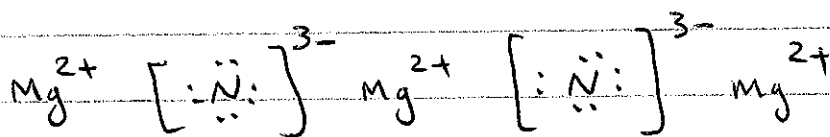
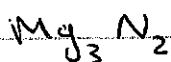
48) Use the Lewis model to predict the formula of the compound that forms between magnesium and nitrogen.



Magnesium must lose its 2 valence electrons (to attain an octet in the previous principal shell).

Nitrogen needs to gain 3 electrons to attain an octet.

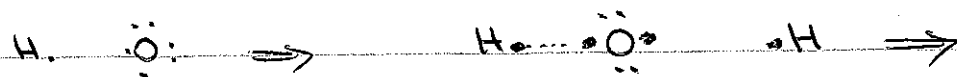
So, the compound that forms between Mg and N has 2 nitrogen atoms ~~to~~ ~~every~~ and 3 magnesium atoms.



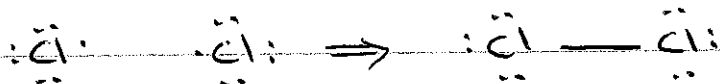
49) Which nonmetal forms an ionic compound with aluminum that has the formula  $\text{Al}_2\text{X}_3$  (where X represents the nonmetal)?

- (a) Cl chlorine must gain 1 electron to obtain an octet
- (b) S** sulfur must gain 2 electrons to obtain an octet
- (c) N Nitrogen must gain 3 electrons to obtain an octet
- (d) C Carbon must gain 4 electrons (usually shares 4 electrons) to obtain an octet.

50) Write the Lewis structure for  $H_2O$ :



51) Write the Lewis structure for  $Cl_2$ :



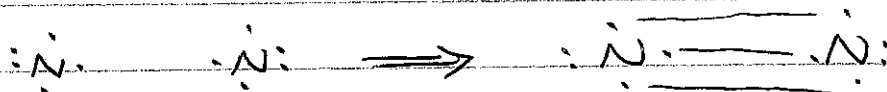
52) Write the Lewis structure for  $H_2$ :



53) Write the Lewis structure for  $O_2$ :



54) Write the Lewis structure for  $N_2$ :



55) How many bonding electrons are in the Lewis structure of  $O_2$ ?

(a) 2

(b) 4

(c) 6

