



1. Name the following compounds: (2)

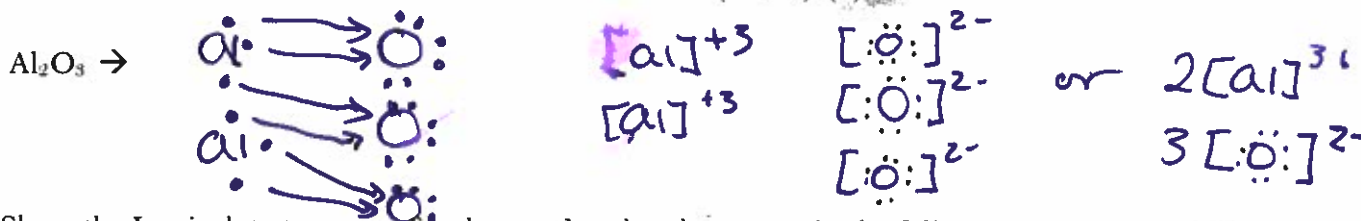
a.  $\text{BeF}_2$  Beryllium Fluoride b.  $\text{Au}_2\text{O}$  Gold(I) oxide

2. Write the chemical formula for: (2)

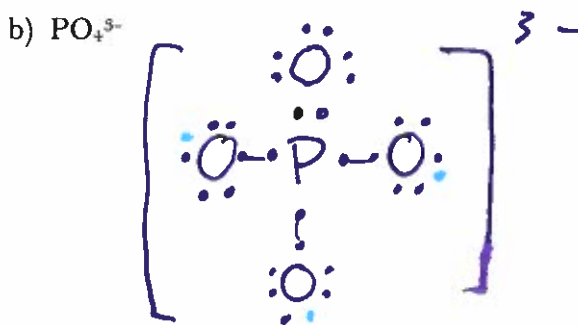
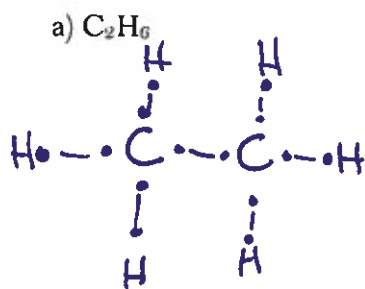
a. Sodium sulfate  $\text{Na}_2\text{SO}_4$  b. Potassium chloride  $\text{KCl}$



3. Compounds containing ionic bonds separate into their respective ions when dissolved. Show the Lewis dot structures for the ions formed for aluminum oxide ( $\text{Al}_2\text{O}_3$ ). (1)



4. Show the Lewis dot structures for the covalent bonds present in the following compounds. (2)



5. Calculate  $\frac{(A+B)}{C}$  if  $A = 10.5 \pm 0.2$   $B = 24.5 \pm 0.2$   $C = 3.5 \pm 0.2$

no units! Show your work and provide a formula for your uncertainty calculations(s). (3)

$$(A+B) \pm (\Delta B + \Delta B) = (10.5 + 24.5) \pm (0.2 + 0.2)$$

$$= 35.0 \pm 0.4$$

$$\frac{(A+B)}{C} = \frac{35.0}{3.5} = 10.0000$$

$$\boxed{10.0 \pm 0.7}$$

$$\Delta \left( \frac{A+B}{C} \right) = \left( \frac{\Delta(A+B)}{A+B} + \frac{\Delta C}{C} \right) \frac{(A+B)}{C}$$

$$= \left( \frac{0.4}{35.0} + \frac{0.2}{3.5} \right) 10.0000$$

$$= 0.685714$$

$$= 0.7$$

Hand in quiz. Finish sheet from last class. Pick up homework.

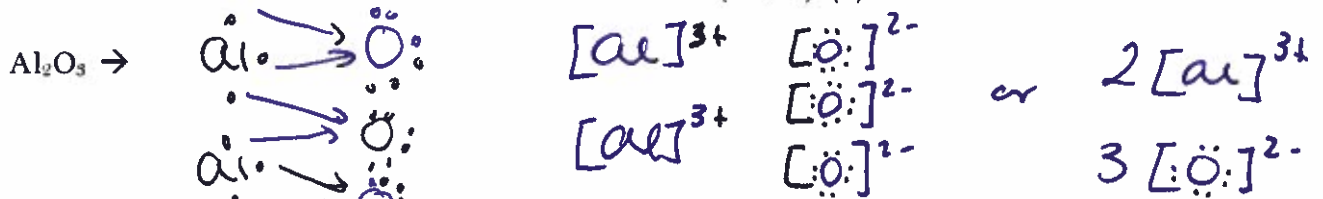
1. Name the following compounds: (2)

a.  $Al_2F_3$  Aluminum Fluoride    b.  $Ni_2O_3$  Nickel(III) oxide

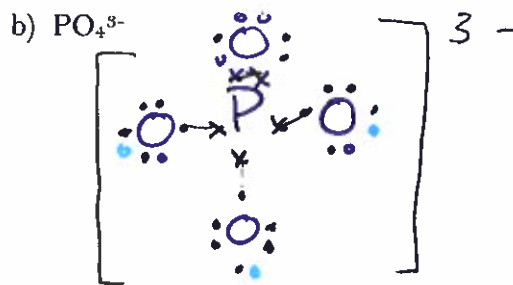
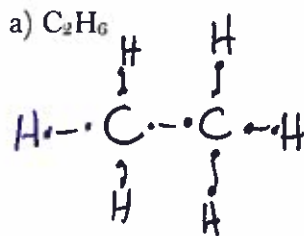
2. Write the chemical formula for: (2)

a. Sodium Phosphate  $Na_3PO_4$     b. Potassium Oxide  $K_2O$   
 $Na PO_4^{3-}$

3. Compounds containing ionic bonds separate into their respective ions when dissolved. Show the Lewis dot structures for the ions formed for aluminum oxide ( $Al_2O_3$ ). (1)



4. Show the Lewis dot structures for the covalent bonds present in the following compounds. (2)



5. Calculate  $\frac{(B-A)}{C}$  if  $A = 10.5 \pm 0.2$      $B = 24.5 \pm 0.2$      $C = 3.5 \pm 0.2$

no units! Show your work and provide a formula for your uncertainty calculations(s). (3)

$$(B-A) \pm (\Delta B + \Delta A) = (24.5 - 10.5) \pm (0.2 + 0.2)$$

$$= (14.0 \pm 0.4)$$

$$\frac{(B-A)}{C} = \frac{14.0}{3.5} = 4.00000$$

$4.0 \pm 0.3$

$$\Delta \frac{(B-A)}{C} = \left( \frac{\Delta(B-A)}{(B-A)} + \frac{\Delta C}{C} \right) \frac{(B-A)}{C}$$

$$= \left( \frac{0.4}{14.0} + \frac{0.2}{3.5} \right) 4.0000$$

$$= 0.342857$$

$$= 0.3$$