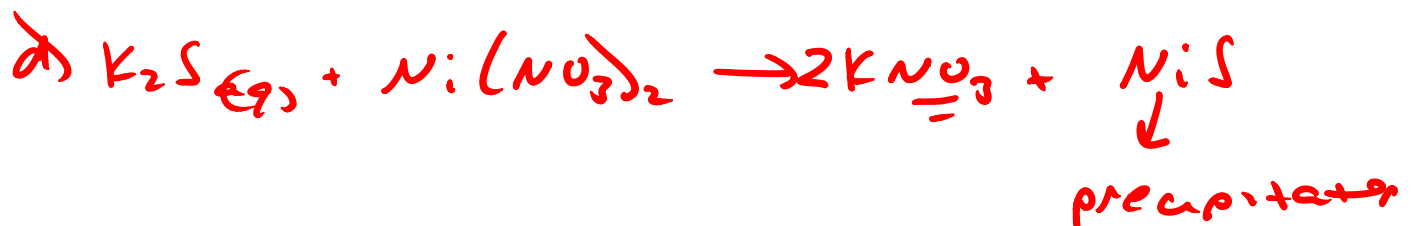
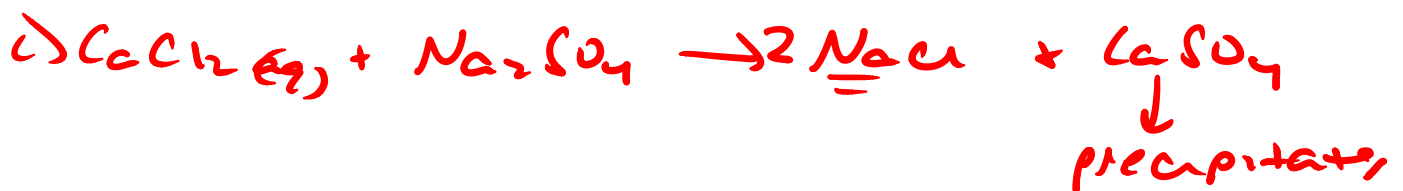
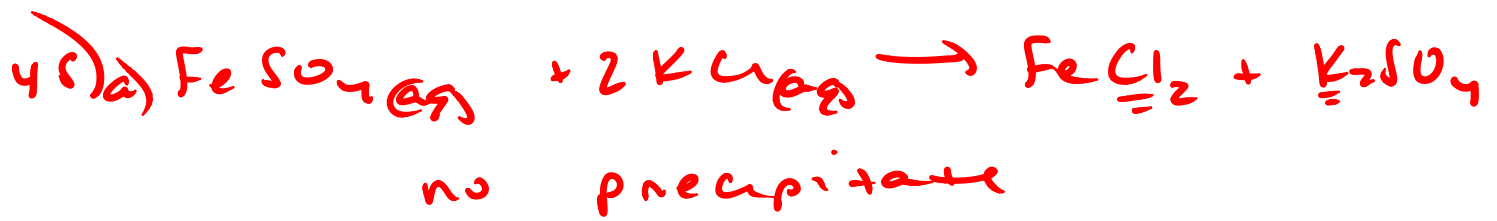
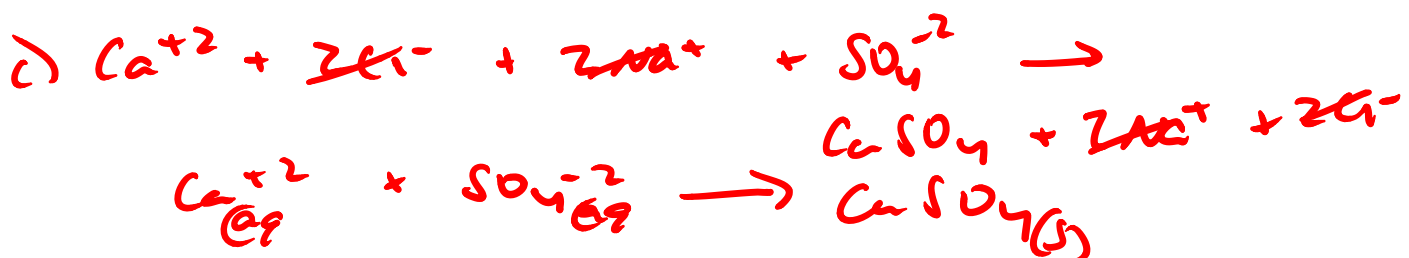
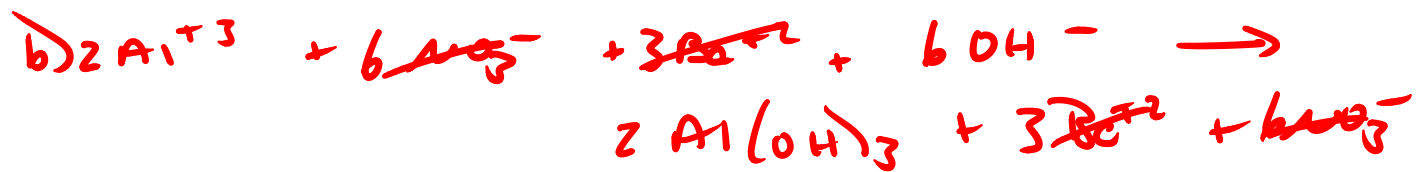
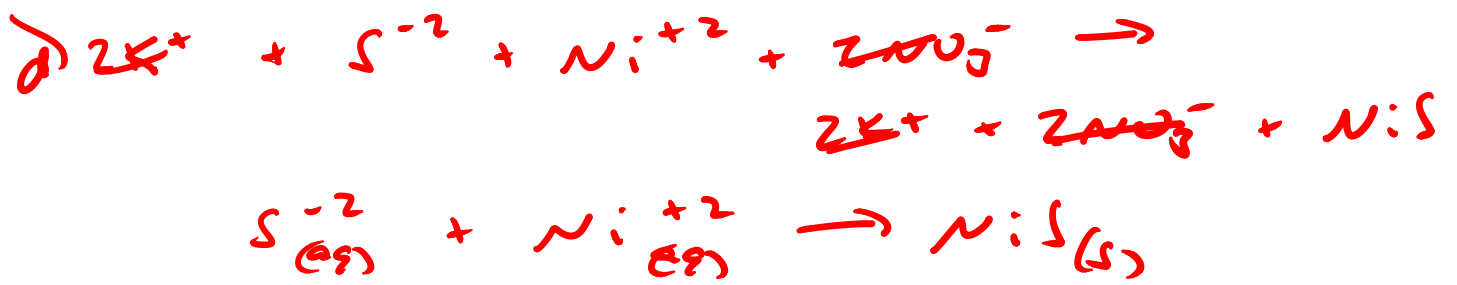


- 43) a) soluble, most nitrates are soluble
- b) soluble, most chlorides are soluble  
except  $\text{Ag}^+$   $\text{Pb}^{+2}$   $\text{Hg}_2^{+2}$
- c) soluble, most sulfates are soluble  
except  $\text{Ag}_2\text{SO}_4$ ,  $\text{PbSO}_4$ ,  $\text{Hg}_2\text{SO}_4$ ,  
 $\text{BaSO}_4$   $\text{CaSO}_4$
- d) insoluble - most hydroxides are insoluble
- e) insoluble, most sulfides are insoluble
- f) insoluble - most hydroxides are insoluble
- g) insoluble - most phosphates are insoluble



4) a) no reaction





Spectators:  $Na^+$  (green)  $Cl^-$  (green)



Spectators:  $Na^+$  (green)  $Cl^-$  (green)



Spectators:  $K^+$  (red)  $NO_3^-$  (blue)



c) no reaction

d) no reaction



53) since  $\text{SO}_4^{2-}$  precipitated,

possible cations are

$\text{Pb}^{2+}$ ,  $\text{Ag}^{+}$ ,  $\text{Hg}_2^{+2}$ ,  $\text{Ba}^{2+}$ ,  $\text{Ca}^{2+}$

• since no ppt formed with KCl

$\text{Pb}^{2+}$ ,  $\text{Ag}^{+}$  and  $\text{Hg}_2^{+2}$  are not there