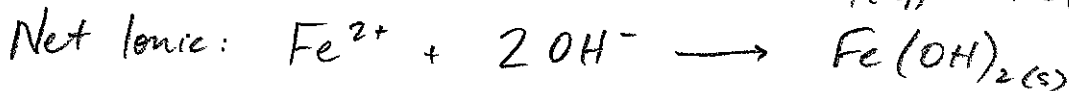


# Solubility Test - Review

## Key



Net Ionic:



~~3.  $Al^{3+} + SO_4^{2-}$~~

4. OMIT

5.  $Cu^{2+}$  (among others)

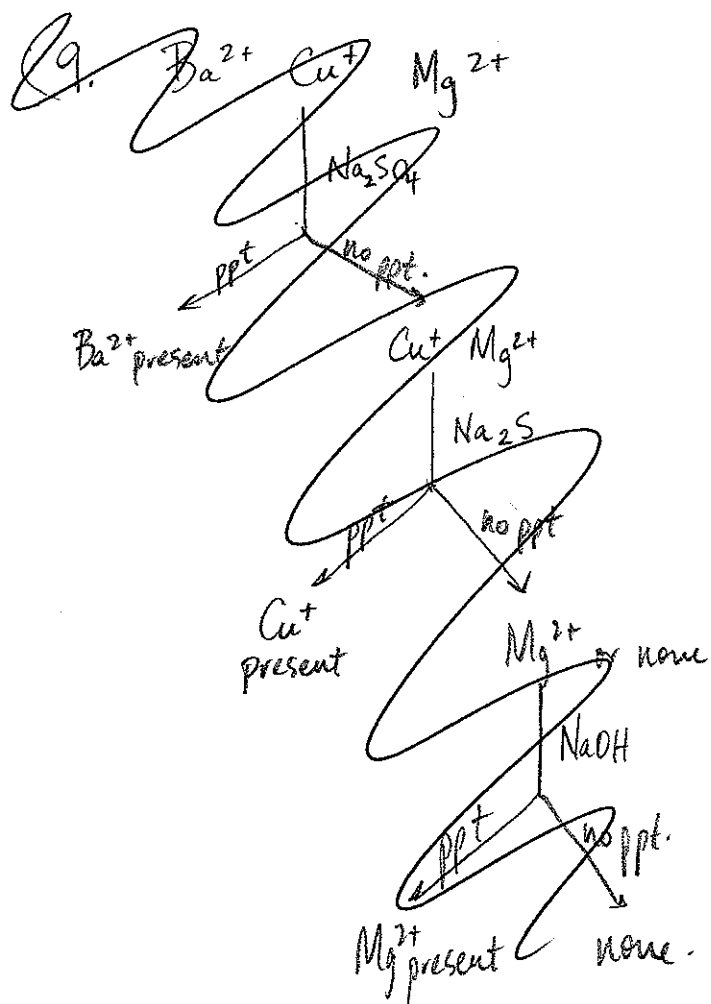
6.  $OH^-$

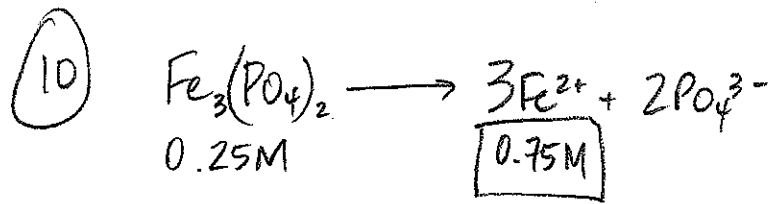
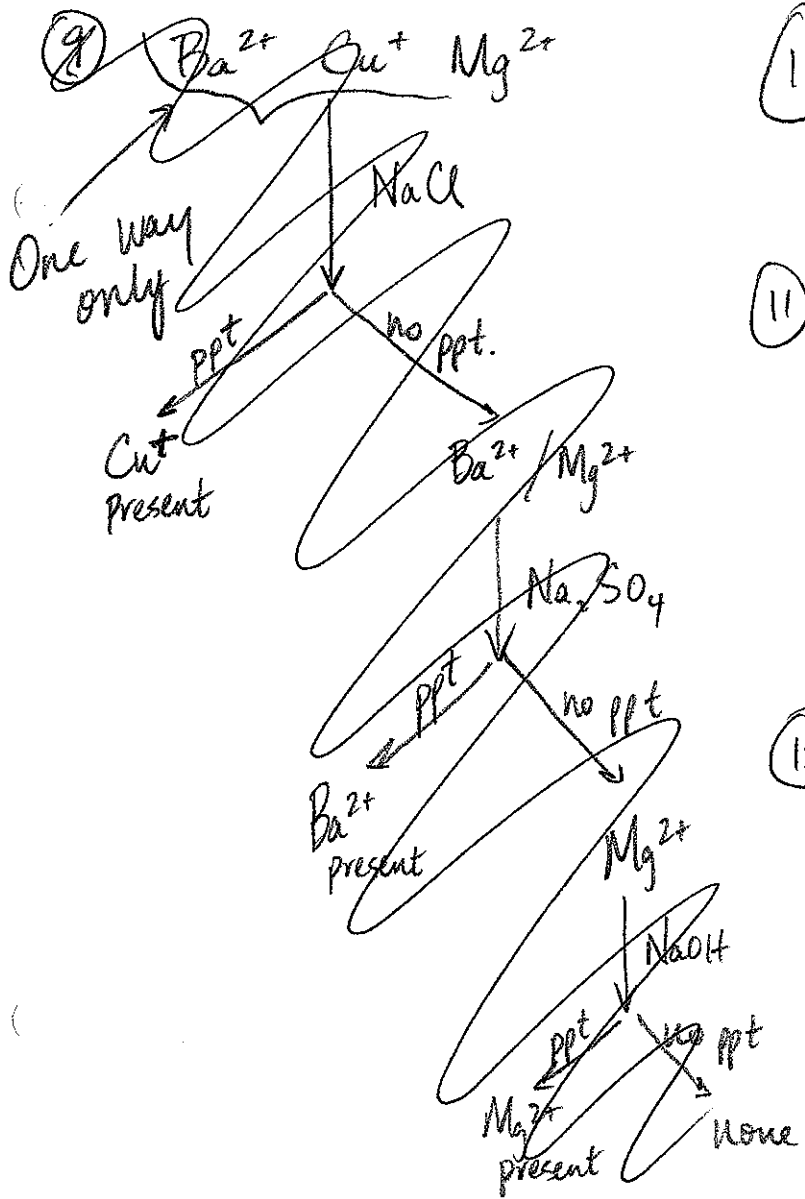
7. See notes / text.

8. 

|               |               |                   |
|---------------|---------------|-------------------|
| <del>MX</del> | <del>KX</del> | <del>PPT</del>    |
| <del>KX</del> | <del>ZH</del> | <del>no ppt</del> |
| <del>MY</del> | <del>SB</del> | <del>ppt</del>    |

MY





11)  $V_f = \frac{M_i V_i}{M_f} = \frac{(0.30M)(0.400L)}{0.10M}$

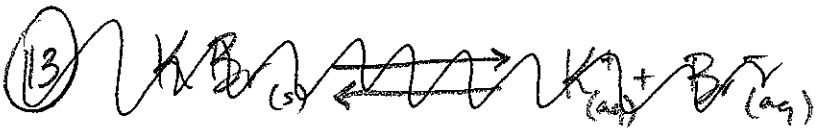
= 1.2 L total

$1.2L - 0.400L = \boxed{0.8L}$

12)  $15.0g CaS \left| \frac{1 \text{ mol}}{72.2g} \right. = 0.2078 \text{ mol CaS}$

$M = \frac{\text{mol}}{V} = \frac{0.2078 \text{ mol CaS}}{1.200L}$

= 0.17M



14) Test conductivity

15)

|             | $Ca^{2+}$ | $Fe^{2+}$ | $Ag^+$ |
|-------------|-----------|-----------|--------|
| $SO_4^{2-}$ | ppt       | ✓         | ppt    |
| $OH^-$      | ppt       | ppt       | ppt    |
| $Br^-$      | ✓         | ✓         | ppt    |

- 1)  $Br^-$  first ( $NaBr$ ) to ppt  $Ag^+$
- 2)  $SO_4^{2-}$  second ( $Na_2SO_4$ ) to ppt  $Ca^{2+}$
- 3)  $OH^-$  third ( $NaOH$ ) to ppt  $Fe^{2+}$