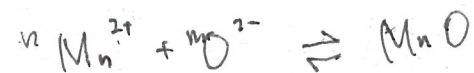
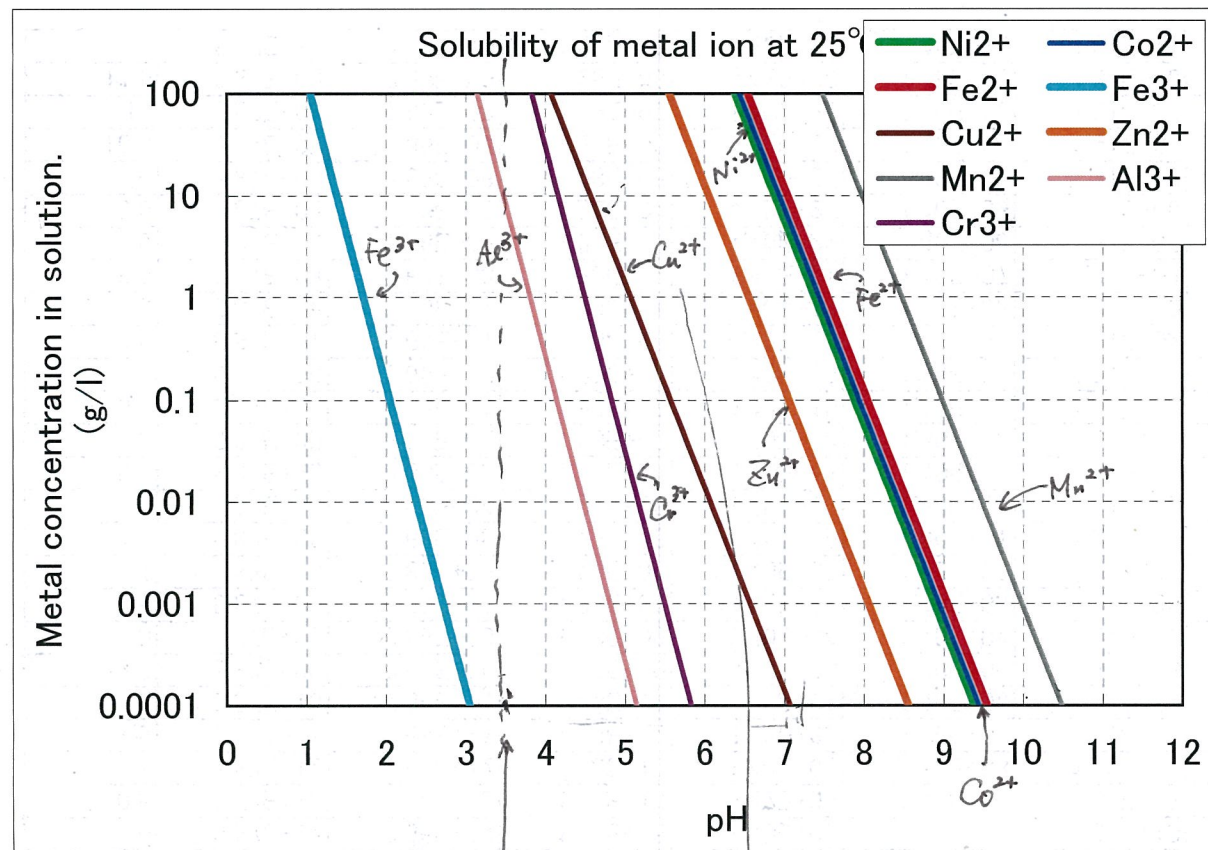
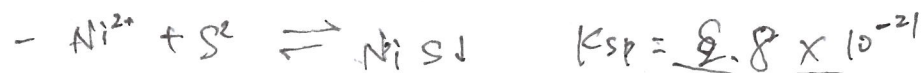
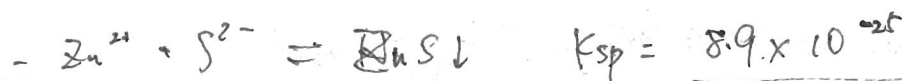
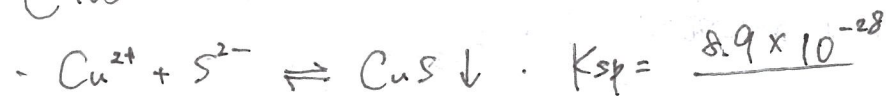


Sol. 7/7
discuss
w/ Eh-pH



@ 10⁻⁵



Solubility product

	K _{sp}	Metal g/mol
Ni(OH) ₂	1.0E-15	58.69
Co(OH) ₂	1.3E-15	58.93
Fe(OH) ₂	2.2E-15	55.85
Fe(OH) ₃	2.5E-39	55.85
Cu(OH) ₂	2.2E-20	63.55
Zn(OH) ₂	2.0E-17	65.39
Mn(OH) ₂	1.7E-13	54.94
Al(OH) ₃	1.0E-32	26.98
Cr(OH) ₃	6.0E-31	52.00

$10^{-20} \rightarrow$ ① ten to (the power of) negative twenty
 ✓ ② ten to negative twenty

pH	Metal concentration in solution (g/l)								
	Ni ²⁺	Co ²⁺	Fe ²⁺	Fe ³⁺	Cu ²⁺	Zn ²⁺	Mn ²⁺	Al ³⁺	Cr ³⁺
0	5.87E+14	7.66E+14	1.23E+15	1.40E+05	1.40E+10	1.31E+13	9.34E+16	2.70E+11	3.12E+13
0.5	5.87E+13	7.66E+13	1.23E+14	4.42E+03	1.40E+09	1.31E+12	9.34E+15	8.53E+09	9.87E+11
1	5.87E+12	7.66E+12	1.23E+13	1.40E+02	1.40E+08	1.31E+11	9.34E+14	2.70E+08	3.12E+10
1.5	5.87E+11	7.66E+11	1.23E+12	4.42E+00	1.40E+07	1.31E+10	9.34E+13	8.53E+06	9.87E+08
2	5.87E+10	7.66E+10	1.23E+11	1.40E-01	1.40E+06	1.31E+09	9.34E+12	2.70E+05	3.12E+07
2.5	5.87E+09	7.66E+09	1.23E+10	4.42E-03	1.40E+05	1.31E+08	9.34E+11	8.53E+03	9.87E+05
3	5.87E+08	7.66E+08	1.23E+09	1.40E-04	1.40E+04	1.31E+07	9.34E+10	2.70E+02	3.12E+04
3.5	5.87E+07	7.66E+07	1.23E+08	4.42E-06	1.40E+03	1.31E+06	9.34E+09	8.53E+00	9.87E+02
4	5.87E+06	7.66E+06	1.23E+07	1.40E-07	1.40E+02	1.31E+05	9.34E+08	2.70E-01	3.12E+01
4.5	5.87E+05	7.66E+05	1.23E+06	4.42E-09	1.40E+01	1.31E+04	9.34E+07	8.53E-03	9.87E-01
5	5.87E+04	7.66E+04	1.23E+05	1.40E-10	1.40E+00	1.31E+03	9.34E+06	2.70E-04	3.12E-02
5.5	5.87E+03	7.66E+03	1.23E+04	4.42E-12	1.40E-01	1.31E+02	9.34E+05	8.53E-06	9.87E-04
6	5.87E+02	7.66E+02	1.23E+03	1.40E-13	1.40E-02	1.31E+01	9.34E+04	2.70E-07	3.12E-05
6.5	5.87E+01	7.66E+01	1.23E+02	4.42E-15	1.40E-03	1.31E+00	9.34E+03	8.53E-09	9.87E-07
7	5.87E+00	7.66E+00	1.23E+01	1.40E-16	1.40E-04	1.31E-01	9.34E+02	2.70E-10	3.12E-08
7.5	5.87E-01	7.66E-01	1.23E+00	4.42E-18	1.40E-05	1.31E-02	9.34E+01	8.53E-12	9.87E-10
8	5.87E-02	7.66E-02	1.23E-01	1.40E-19	1.40E-06	1.31E-03	9.34E+00	2.70E-13	3.12E-11
8.5	5.87E-03	7.66E-03	1.23E-02	4.42E-21	1.40E-07	1.31E-04	9.34E-01	8.53E-15	9.87E-13
9	5.87E-04	7.66E-04	1.23E-03	1.40E-22	1.40E-08	1.31E-05	9.34E-02	2.70E-16	3.12E-14
9.5	5.87E-05	7.66E-05	1.23E-04	4.42E-24	1.40E-09	1.31E-06	9.34E-03	8.53E-18	9.87E-16
10	5.87E-06	7.66E-06	1.23E-05	1.40E-25	1.40E-10	1.31E-07	9.34E-04	2.70E-19	3.12E-17
10.5	5.87E-07	7.66E-07	1.23E-06	4.42E-27	1.40E-11	1.31E-08	9.34E-05	8.53E-21	9.87E-19
11	5.87E-08	7.66E-08	1.23E-07	1.40E-28	1.40E-12	1.31E-09	9.34E-06	2.70E-22	3.12E-20
11.5	5.87E-09	7.66E-09	1.23E-08	4.42E-30	1.40E-13	1.31E-10	9.34E-07	8.53E-24	9.87E-22
12	5.87E-10	7.66E-10	1.23E-09	1.40E-31	1.40E-14	1.31E-11	9.34E-08	2.70E-25	3.12E-23