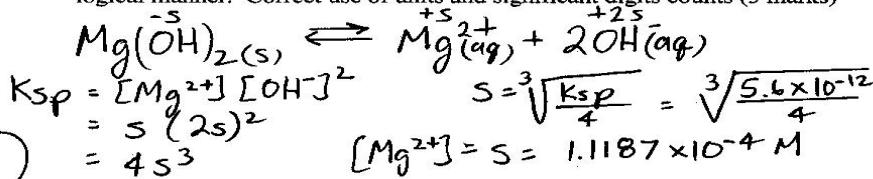


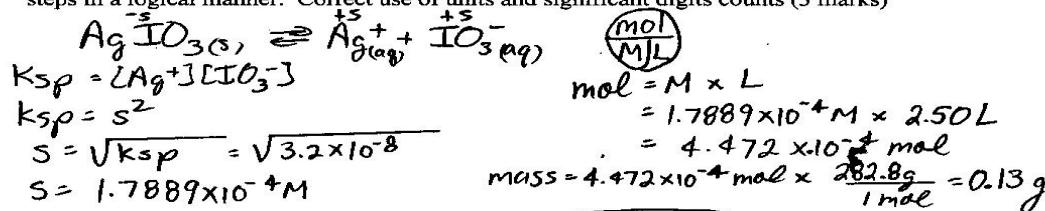
7. Calculate the $[Mg^{2+}]$ in a saturated solution of $Mg(OH)_2$ at 25°C. Show all your steps in a logical manner. Correct use of units and significant digits counts (3 marks)



(3)

Answer $[Mg^{2+}] = 1.1 \times 10^{-4} M$

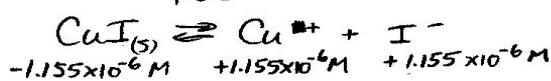
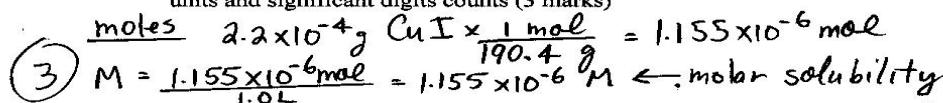
8. Calculate the mass of $AgIO_3$ which will dissolve in 2.50 L of water at 25°C. Show all your steps in a logical manner. Correct use of units and significant digits counts (3 marks)



(3)

Answer 0.13 g

9. At a certain temperature 2.2×10^{-4} grams of CuI will dissolve in 1.0 L of water. Calculate the K_{sp} for CuI at this temperature. Show all your steps in a logical manner. Correct use of units and significant digits counts (3 marks)



$$K_{sp} = [Cu^{2+}][I^-]^2$$

$$= (1.155 \times 10^{-6})^2$$

$$= 1.3 \times 10^{-12}$$

(9)
9

Answer $K_{sp} = 1.3 \times 10^{-12}$