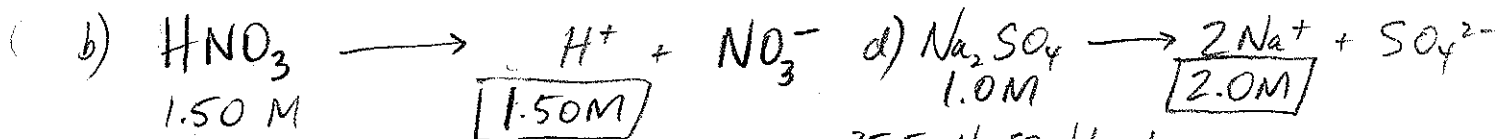
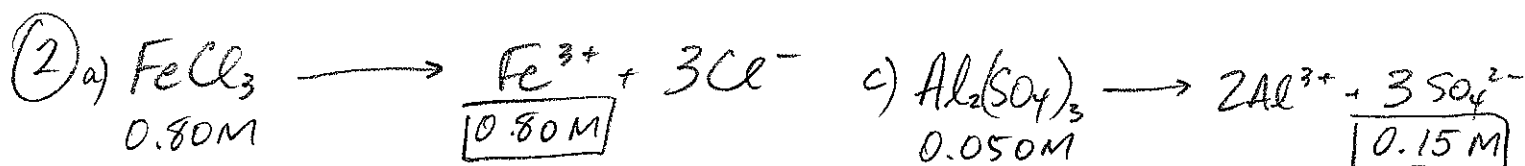
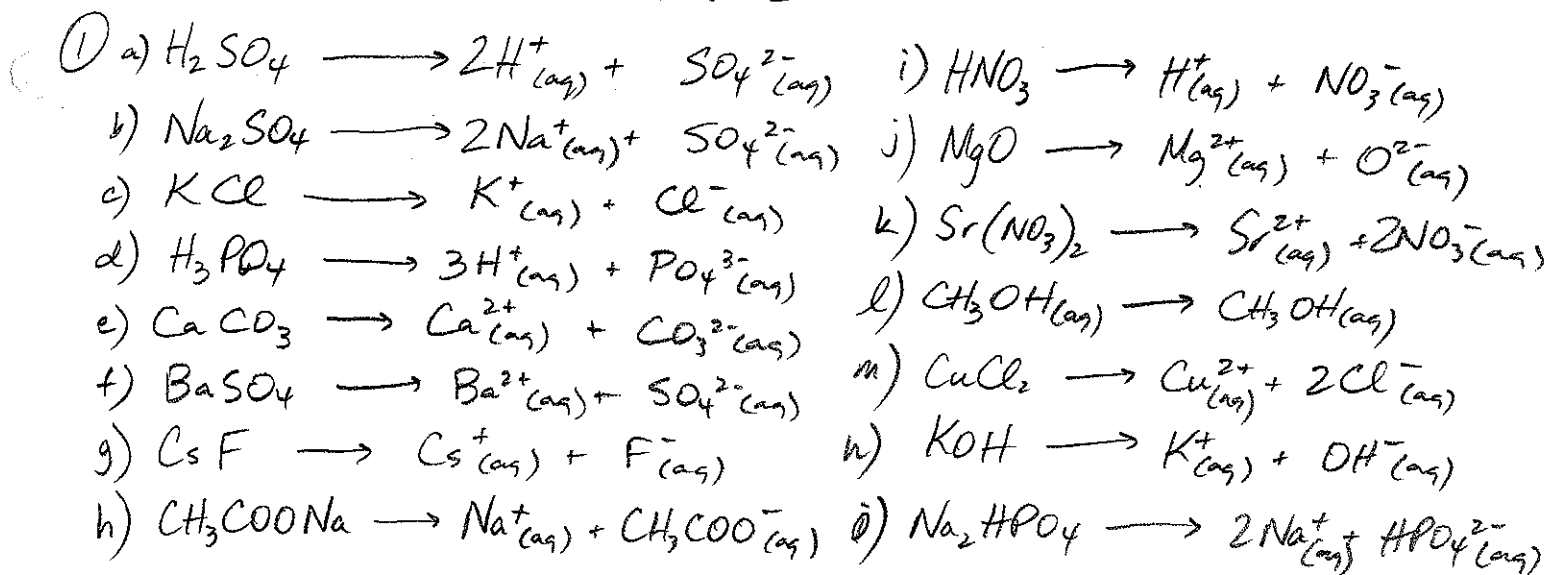


Answer Key - Chem. 11 ©

Worksheet 2



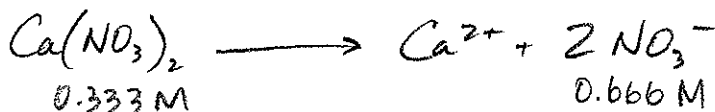
$$\frac{35.5 \text{ g } Na_2SO_4 / 1 \text{ mol}}{142.1 \text{ g}} = 0.2498 \text{ mol}$$

$$M = \frac{\text{mol}}{V} = \frac{0.2498 \text{ mol}}{0.250 \text{ L}} = 1.0 \text{ M}$$



$$M_f = \frac{M_i V_i}{V_f} = \frac{(0.75 \text{ M})(0.050 \text{ L})}{0.150 \text{ L}}$$

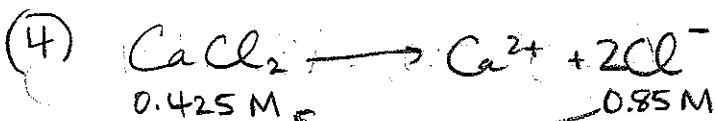
$$= 0.25 \text{ M}$$



$$M_f = \frac{M_i V_i}{V_f} = \frac{(0.50 \text{ M})(0.100 \text{ L})}{0.150 \text{ L}}$$

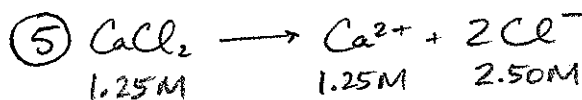
$$= 0.333 \text{ M}$$

$$[NO_3^-] = 0.25 \text{ M} + 0.666 \text{ M} = \text{0.92 M}$$



$$\text{mol} = MV = (0.425 \text{ M})(5.0 \text{ L}) = 2.125 \text{ mol } CaCl_2$$

$$2.125 \text{ mol} \left| \frac{111.1 \text{ g}}{1 \text{ mol}} \right. = 236 \text{ g} = \text{240 g}$$



$$V_f = \frac{M_i V_i}{V_f} = \frac{(2.50 \text{ M})(0.250 \text{ L})}{0.75 \text{ M}} = 0.8333 \text{ L total}$$

$$0.8333 \text{ L} - 0.250 \text{ L} = 0.583 \text{ L} \text{ } \text{0.58 L}$$