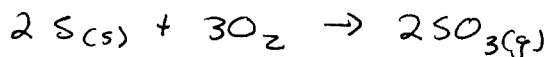
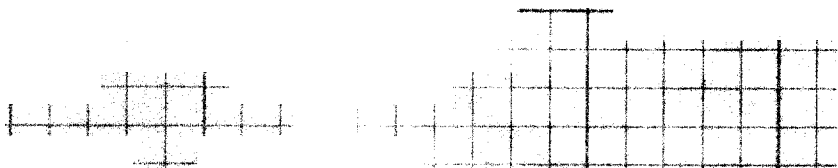
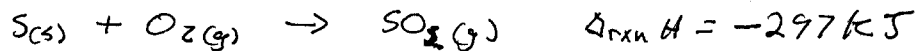


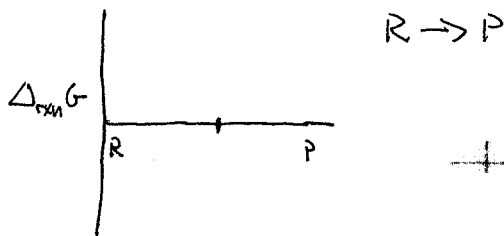
① calculate  $\Delta_{rxn} H$  for



given



② Sketch a graph of  $\Delta_{rxn} G$  for a product favored reaction



③ Indicate "increase", "decrease" or "no effect" on the Partitioning of an ion between water and chlorobenzene according to the Born model

$$A_{or} \rightleftharpoons A_w \quad \Delta G_{\beta \rightarrow \alpha} = \frac{(ze)^2}{8\pi\epsilon_0 r_i} \left( \frac{1}{\epsilon_\alpha} - \frac{1}{\epsilon_\beta} \right)$$

- a) \_\_\_\_\_ increase the charge of the ion
- b) \_\_\_\_\_ Use an ion in which  $H_2O$  act as a ligand ( $M^+ \cdot n H_2O$ )
- c) \_\_\_\_\_ Heat the solution
- d) \_\_\_\_\_ Add more ions
- e) \_\_\_\_\_ Put methanol into the water

