THE COMMON ION EFFECT

Strontium sulphate, $SrSO_4$, has a solubility product of 3.2×10^{-7} mol^2 dm^{-6}.

a) Write the equilibrium equation for the changes that happen in a saturated solution of strontium sulphate in the presence of some solid.

b) Work out the concentration of the dissolved strontium ions in mol dm^{-3}.

c) If you added some sodium sulphate solution to a saturated solution of strontium sulphate, what would you expect to happen to the concentration of dissolved strontium ions? Explain your answer.

d) Suppose the concentration of the sulphate ions in the mixture was 0.50 mol dm^{-3} (virtually all of which is due to the ions from the sodium sulphate), work out the new concentration of the strontium ions after the addition of the sodium sulphate solution.