Challenge Problem #4

Name ____________________________

Due Monday, Feb. 27, 2005, 5:00 pm. Room 121 Chemistry

A 0.831 g sample of SO₃ is placed in a 1.00 L container and heated to 1100 K. The SO₃ decomposes to SO₂ and O₂.

\[ 2 \text{SO}_3 (g) \rightleftharpoons 2 \text{SO}_2 (g) + \text{O}_2 (g) \]

At equilibrium, the total pressure in the container is 1.300 atm. Find the values of \( K_P \) and \( K_c \) for this reaction at 1100 K.