

## Answer to Question #50813, Chemistry, Physical Chemistry

at 727 degree temperature the equilibrium constant of this reaction is 256.

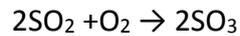


WHAT IS THE EQUILIBRIUM CONSTANT AT SAME TEMPERATURE FOR THIS REACTION



ANS  $6.25 \times 10^{-2}$  HOW??

**Solution:**



$$K_1 = \frac{[\text{SO}_2]^2[\text{O}_2]}{[\text{SO}_3]^2}$$



$$K_2 = \frac{[\text{SO}_3]^2}{[\text{SO}_2]^2[\text{O}_2]}$$

$$K_2 = \frac{1}{K_1}$$

$$K_2 = \frac{1}{256} = 3.91 \times 10^{-3}$$

**Answer:**

**$3.91 \times 10^{-3}$**

<https://www.AssignmentExpert.com>