

1. How would increasing the temperature affect the reaction rate? Lowering the temperature? Explain.
2. How would adding a catalyst affect the reaction rate? Explain.
3. How does the forward reaction rate compare to the reverse reaction rate when equilibrium is established?

4. Given the following system at equilibrium: $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \leftrightarrow 2\text{SO}_3(\text{g}) + \text{heat}$

Determine the effect of each of the following changes on the equilibrium position (shifts left or right) and on the amount of O_2 that would result (increase or decrease).

	Reaction Shift (left or right)	Amount of O_2 (increase or decrease)
Increasing temperature		
Decreasing pressure		
Adding SO_2		
Removing SO_3		
Increasing pressure		
Adding SO_3		
Decreasing temperature		
Removing SO_2		