Model 2:

$$A + B \rightarrow C \quad \Delta H_1 \quad v_1 = \overrightarrow{k_1} \cdot A \cdot B$$

$$A + B \leftarrow C \quad \Delta H_2 = -\Delta H_1 \quad v_1 = \overleftarrow{k_2} \cdot C$$

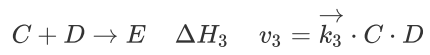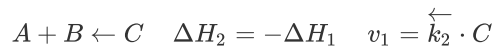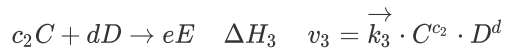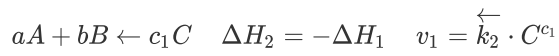$$C + D \rightarrow E \quad \Delta H_3 \quad v_3 = \overrightarrow{k_3} \cdot C \cdot D$$

$k_1 = 9.56 \cdot 10^{-3}; k_2 = 3.93 \cdot 10^{-9}; k_3 = 8.44 \cdot 10^{-3}$

$H_1 = 9.8 \ kJ/mol; H_3 = 37.3 \ kJ/mol$

Model 3:

$$aA + bB \rightarrow c_1 C \quad \Delta H_1 \quad v_1 = \overrightarrow{k_1} \cdot A^a \cdot B^b$$

$$aA + bB \leftarrow c_1 C \quad \Delta H_2 = -\Delta H_1 \quad v_1 = \overleftarrow{k_2} \cdot C^{c_1}$$

$$c_2 C + dD \rightarrow eE \quad \Delta H_3 \quad v_3 = \overrightarrow{k_3} \cdot C^{c_2} \cdot D^d$$

$k_1 = 8.47 \cdot 10^{-4}; k_2 = 1.28 \cdot 10^{-4}; k_3 = 1.55 \cdot 10^{-2}$

$H_1 = 131.9 \ kJ/mol; H_3 = -143.0 \ kJ/mol$

$a = 0.355; b = 0.222; c_1 = 2.111; c_2 = 2.612 ; d = 1.076$