Model 2:

$$egin{aligned} A+B
ightarrow C & \Delta H_1 & v_1 = \overrightarrow{k_1} \cdot A \cdot B \ A+B \leftarrow C & \Delta H_2 = -\Delta H_1 & v_1 = \overleftarrow{k_2} \cdot C \ C+D
ightarrow E & \Delta H_3 & v_3 = \overrightarrow{k_3} \cdot C \cdot D \end{aligned}$$

$$k_1 = 9.56 \cdot 10^{-3}$$
; $k_2 = 3.93 \cdot 10^{-9}$; $k_3 = 8.44 \cdot 10^{-3}$
 $H_1 = 9.8 \; kJ/mol$; $H_3 = 37.3 \; kJ/mol$

Model 3:

$$egin{aligned} aA+bB
ightarrow c_1C & \Delta H_1 & v_1 = \overrightarrow{k_1} \cdot A^a \cdot B^b \ aA+bB \leftarrow c_1C & \Delta H_2 = -\Delta H_1 & v_1 = \overleftarrow{k_2} \cdot C^{c_1} \ c_2C+dD
ightarrow eE & \Delta H_3 & v_3 = \overrightarrow{k_3} \cdot C^{c_2} \cdot D^d \end{aligned}$$

$$\begin{split} k_1 &= 8.47 \cdot 10^{-4}; \, k_2 = 1.28 \cdot 10^{-4}; \, k_3 = 1.55 \cdot 10^{-2} \\ H_1 &= 131.9 \, \, kJ/mol; \, H_3 = -143.0 \, \, kJ/mol \\ a &= 0.355; \, b = 0.222; \, c_1 = 2.111; \, c_2 = 2.612 \, ; \, d = 1.076 \end{split}$$