43.5

TS-b

17.8

TS-a

15.3

TS-r

5.1

0.0

Pseudorotamer

-41.9

-30.4

Reactant

$$C \xleftarrow{K_1} A \underset{}{\overset{K}{\rightleftharpoons}} B \xrightarrow{K_2} D$$

Case I: More stable conformer reacts more quickly

Case III: both conformers react at the same rate

Case II: Less stable conformer reacts more quickly

$$\frac{[D]}{[C]} = \frac{k_2}{k_1 K} = \frac{e^{-\Delta G_2^{\ddagger}/RT}}{e^{-\Delta G_1^{\ddagger}/RT} e^{-\Delta G/RT}} = e^{-\frac{\Delta\Delta G^{\ddagger}}{RT}}$$