$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g) \; \Delta H = -92 \text{ kJ/mol}$

Rate of the forward reaction increases more than the rate of the backward reaction until equilibrium is established once more

equilibrium reached

Forward reaction

Reverse reaction

equilibrium reached

H_2

N_2

NH_3

reverse reaction

forward reaction

equilibrium reached

equillibrium reached

H_2

N_2

NH_3

Reaction rate

forward reaction
reverse reaction

equilibrium reached

Concentration (mol/L)

N_2

NH_3

H_2

equilibrium reached

Reaction rate

forward reaction
reverse reaction

equilibrium reached

Concentration (mol/L)

NH_3

H_2

N_2

equilibrium is reached

Reaction rate

forward reaction
reverse reaction

equilibrium is reached

rate

Forward

Reverse

t1   t2
time

For the reaction $2AB(g) \rightleftharpoons 2A(g) + B_2(g)$, $\Delta H = 26$ kJ

the following graph can be plotted: