•	At 700 °C, hydrogen	and iodine react	according to the	e following equation.
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 $H_2(g) + I_2(g) \longrightarrow 2HI(g)$

 $K_{\rm c} = 49.0$

Hydrogen also reacts with sulfur at 700 °C:

$$2H_2(g) + S_2(g)$$
 \longrightarrow $2H_2S(g)$ $K_c = 1.075 \times 10^8$

$$K_c = 1.075 \times 10^8$$

Determine K_c for the following overall equilibrium reaction at 700 °C.

$$2I_2(g) + 2H_2S(g)$$
 \longrightarrow $S_2(g) + 4HI(g)$

 $K_{c} =$

What is the standard free energy change at 700 °C for this overall equilibrium reaction?

Answer:

Marks 5