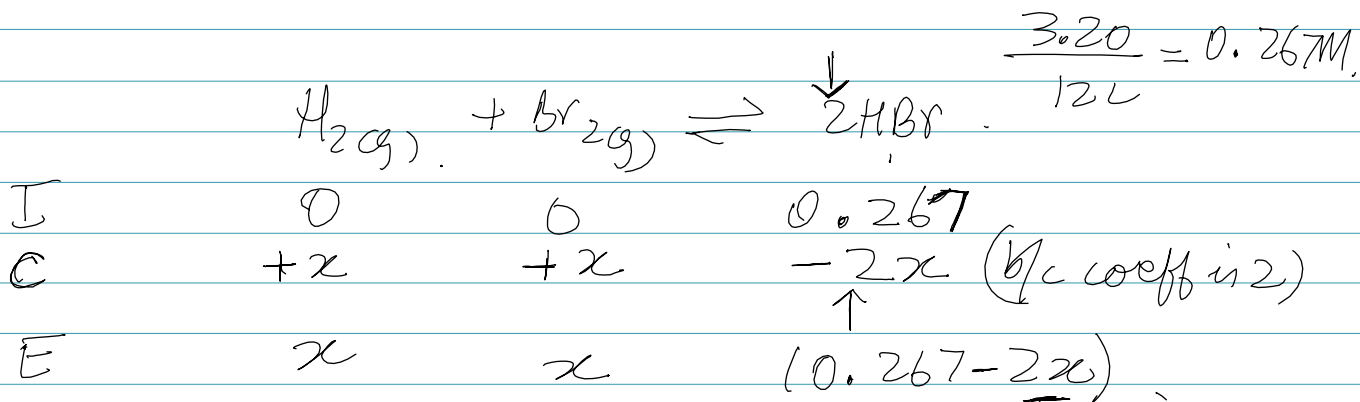


Sapna Singh

Eq. 6) Equilibrium Calculation (ICE) ②

* The reaction $\text{H}_2(\text{g}) + \text{Br}_2(\text{g}) \rightleftharpoons 2\text{HBr}$ has a K_c of 2.18×10^6 at 730°C . Calculate the conc. of H_2 , Br_2 and HBr if starting conc. of HBr is 3.20 mol in a 12.0L container.

Ans



$$K_c = \frac{[\text{HBr}]^2}{[\text{H}_2][\text{Br}_2]} = \frac{(0.267 - 2x)^2}{(x)(x)}$$

$$2.18 \times 10^6 = \frac{(0.267 - 2x)^2}{x^2}$$

✓ everything above.

$$1.48 \times 10^3 = \frac{0.267 - 2x}{x}$$

$$x = \boxed{1.80 \times 10^{-4}}$$

↑
[H₂] & [Br₂]

* coeff!! ~~2x~~ 2x