

1532

$$\text{H}_2 + \text{Br}_2 \rightleftharpoons 2\text{HBr}$$

22 I 1.374g I 70.31g

$E = 0.566\text{g}$

| | |
|----------------------------------|--------------------------------|
| 70.31g Br₂ | mdel Br ₂ |
| | 160g Br₂ |

F 0.22M

| | |
|---------------------------------|-----------------------------|
| 1.374g H₂ | mdel H ₂ |
| | 2g H₂ |

I 0.341M H₂

| | |
|---------------------------------|-----------------------------|
| 0.566g H₂ | mdel H ₂ |
| | 2g H₂ |

F 0.14M H₂

$M = \frac{\text{mdel}}{P}$

Mar 1-8:11 AM

$$\text{H}_2 + \text{Br}_2 \rightleftharpoons 2\text{HBr}$$

| | | | |
|----------|-------|-------|------|
| I | 0.34 | 0.22 | |
| Δ | -0.2 | -0.2 | +0.4 |
| E | 0.14M | 0.02M | 0.4M |

MOLE RATIO

K >> 1
makes lots of product

$$K_c = \frac{(\text{HBr})^2}{(\text{H}_2)(\text{Br}_2)} = \frac{(0.4)^2}{(0.14)(0.02)} = 57.2$$

Prod

React

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AP/SUPA Chem STEP

$$2^{45} \Rightarrow 4^{45}$$

(log in by 3^{45})

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Instead of K \leftarrow AT EQUILIB

Use of "Q" $\frac{[P]^x}{[R]^y}$

Q is K BUT NOT AT Equilibrium

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Know Q and Know K

$$\begin{matrix} \xrightarrow{F} \\ \xleftarrow{R} \end{matrix}$$

We can figure out which way to go to reach equilibrium.

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$$\text{H}_2(\text{g}) + \text{I}_2(\text{g}) \rightleftharpoons 2\text{HI}(\text{g})$$

$$\frac{1 \times 10^{-2} \text{ mole}}{\text{L}} \quad \frac{3 \times 10^{-2} \text{ mole}}{\text{L}} \quad \frac{2 \times 10^{-2} \text{ mole}}{\text{L}} \quad K_c = 50.5$$

AT EQ???

$n = \frac{\text{moles}}{L} \leftarrow 2$

$$Q = \frac{(\text{HI})^2}{(\text{H}_2)(\text{I}_2)} = \frac{(1 \times 10^{-2})^2}{(0.5 \times 10^{-2})(1.5 \times 10^{-2})} = 1.333$$

$$Q = 1.333 < K = 50.5$$

NOT AT EQUILIB YET.

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Need Quadratic Formula

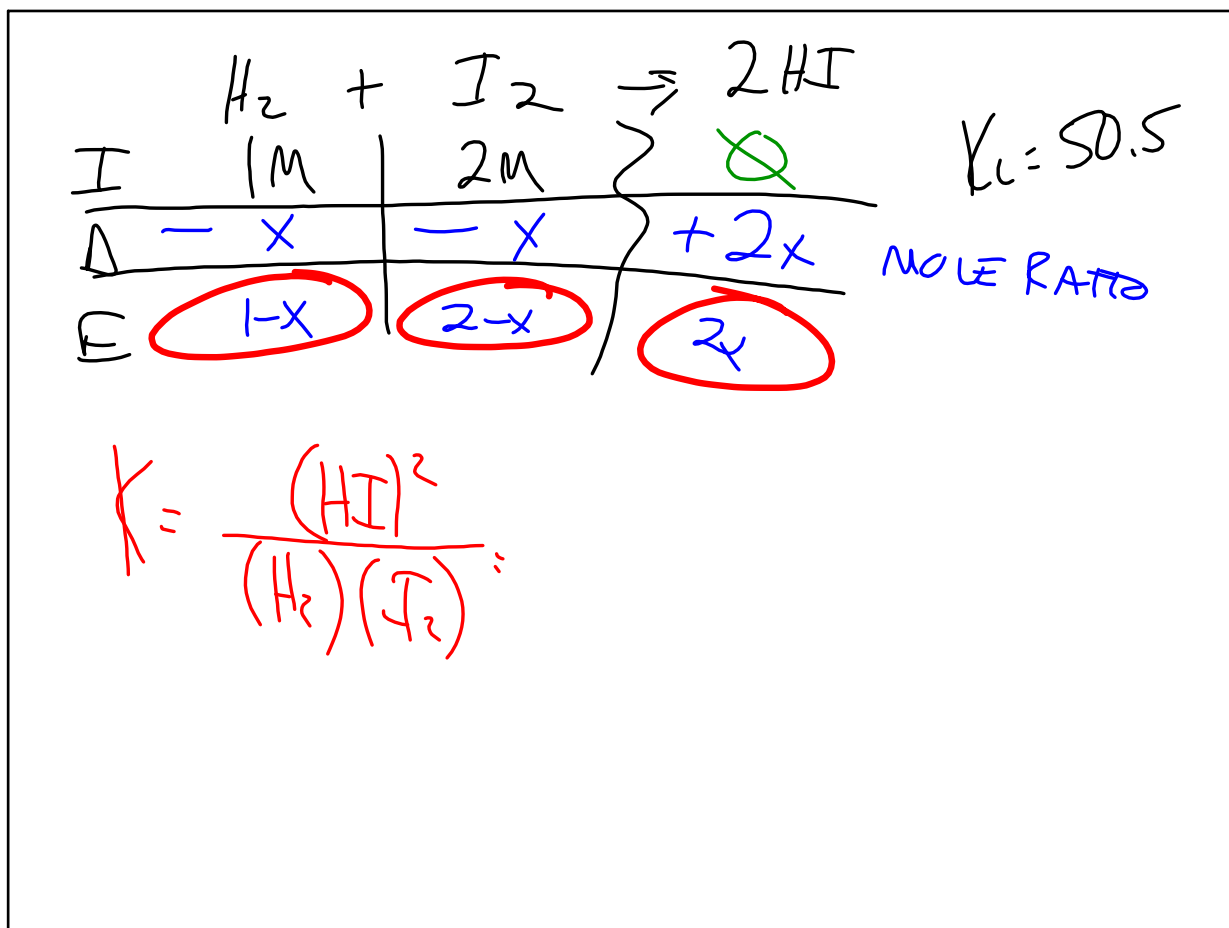
$$\underline{a}x^2 + \underline{b}x + \underline{c} = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Mar 1-8:40 AM

$$15 / 37 + 40$$

Mar 1-8:44 AM



Mar 1-8:45 AM