

④ $2S + 2O_2 \rightarrow 2SO_2$ $\left(\frac{1}{2.5 \times 10^{-53}}\right)^2$
 ~~$2SO_2 + O_2 \rightarrow 2SO_3$~~ $\left(\frac{1}{4 \times 10^{-13}}\right)^2$ *

$2S + 3O_2 \rightarrow 2SO_3$

$\left(\frac{1}{2.5 \times 10^{-53}}\right)^2 = \left(\frac{0.4 \times 10^{53}}{1}\right)^2 = (4 \times 10^{52})^2 = 16 \times 10^{104}$

$\left(\frac{1}{4 \times 10^{-13}}\right)^2 = \left(\frac{0.25 \times 10^{13}}{1}\right)^2 = (2.5 \times 10^{12})^2 = \frac{6.25 \times 10^{24}}{100 \times 10^{128}} = 1 \times 10^{130}$

Feb 10-8:05 AM

X $\frac{\text{Power}}{\text{root}}$ $x^{1/2} = \sqrt{x}$

Feb 10-8:19 AM

$$\textcircled{7} \quad K = 32$$

$$Q = \frac{(\text{Br}_2)(\text{Cl}_2)}{(\text{BrCl})^2} = \frac{(0.05)(0.05)}{(0.05)^2} = 1$$

$$Q < K$$



Feb 10-8:20 AM

$$\begin{aligned} \textcircled{8} \quad K_p &= K_c (RT)^{\Delta n} \\ &= 54 \left[(0.08206) (700\text{K}) \right]^2 \\ &= (54) \quad | \\ &= 54 \end{aligned}$$

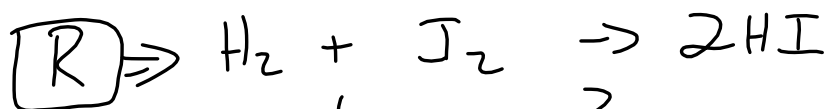
Feb 10-8:22 AM

$$(10) K_p = K_c [RT]^{\Delta n}$$

$$6.8 \times 10^5 = K_c \left[(0.08206)(298) \right]^{-2}$$

$$\frac{6.8 \times 10^5}{1} = \frac{K_c}{\left((0.08206)(298) \right)^2}$$

Feb 10-8:24 AM



I	3	2	0
K	-1	-1	+2
E	2	1	2

Rede Ratio

Solver

$$K_c = \frac{(HI)^2}{(H_2)(I_2)} = \frac{2^2}{(2)(1)} = 2$$

Feb 10-8:26 AM

$K_c = 50.5$

I	1M	2M	&
Δ	-x	-x	+ 2x
E	1-x 1-0.935	2-x 2-0.935	2x 2(0.935)

MOLE RATIO

Find \rightarrow

$$K_c = \frac{(HI)^2}{(H_2)(I_2)} = \frac{(2x)^2}{(1-x)(2-x)} = 50.5$$

$$\frac{4x^2}{x^2 - 3x + 2} = 50.5$$

$$4x^2 = 50.5x^2 - 151.5x + 101$$

$$-4x^2 - 4x^2$$

$$46.5x^2 - 151.5x + 101 = 0$$

↑
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~~$x_1 = 2.323$~~
 $x_2 = 0.935$

(can't have ⊖ conc.)

Feb 10-8:28 AM

$K_p = 0.497$

I	1.66 atm	&	&
Δ	-x	+x	+x
E	1.66-x 1.66-0.693	x 0.693	x 0.693

$$K = \frac{(P_{Cl_3})(P_{Cl_2})}{(P_{Cl_5})} = \frac{(x)(x)}{1.66-x} = \frac{0.497}{1}$$

$$x^2 = 0.497(1.66-x)$$

$$x^2 + 0.497x - 0.825 = 0$$

$x = 0.693$

Feb 10-8:38 AM

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PSIS # 13-15

Feb 10-8:43 AM