

$P = nRT$   
 $K_p = K_c (RT)^{\Delta n}$   
 $54 = K_c \left( (0.08206)(200) \right)^{\Delta n}$   
 $6.8 \times 10^5 = K_c \left( (0.08206)(298) \right)^{-2}$   
 $\frac{6.8 \times 10^5}{1} = \frac{K_c}{\left[ (0.08206)(298) \right]^2}$

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$3 \text{N}_2\text{H}_4 + 4 \text{ClF}_3 \rightleftharpoons 12 \text{HF} + 3 \text{N}_2 + 2 \text{Cl}_2$   

I	0.88	0.88				
D	-	-0.7	+		+0.525	+
E		0.18			0.525	

$$\frac{5}{x} = \frac{3}{0.525}$$

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(15)  $\text{NH}_3(\text{g}) + \text{H}_2\text{S}(\text{g}) \rightleftharpoons \text{NH}_4\text{HS}(\text{s}) \quad K_c = 9.7$

I	1	1	<del>0</del>
D	-x	-x	
E	1-x	1-x	

$$K = \frac{1}{[\text{NH}_3][\text{H}_2\text{S}]} = 9.7 \quad (x = 0.68)$$

$$\sqrt{\frac{1}{(1-x)(1-x)}} = \sqrt{9.7}$$

$$\frac{1}{1-x} = \sqrt{9.7}$$

$$\frac{\sqrt{9.7} - \sqrt{9.7}x}{-\sqrt{9.7}} = \frac{1}{-\sqrt{9.7}}$$

$$-\sqrt{9.7}x < 1 - \sqrt{9.7}$$

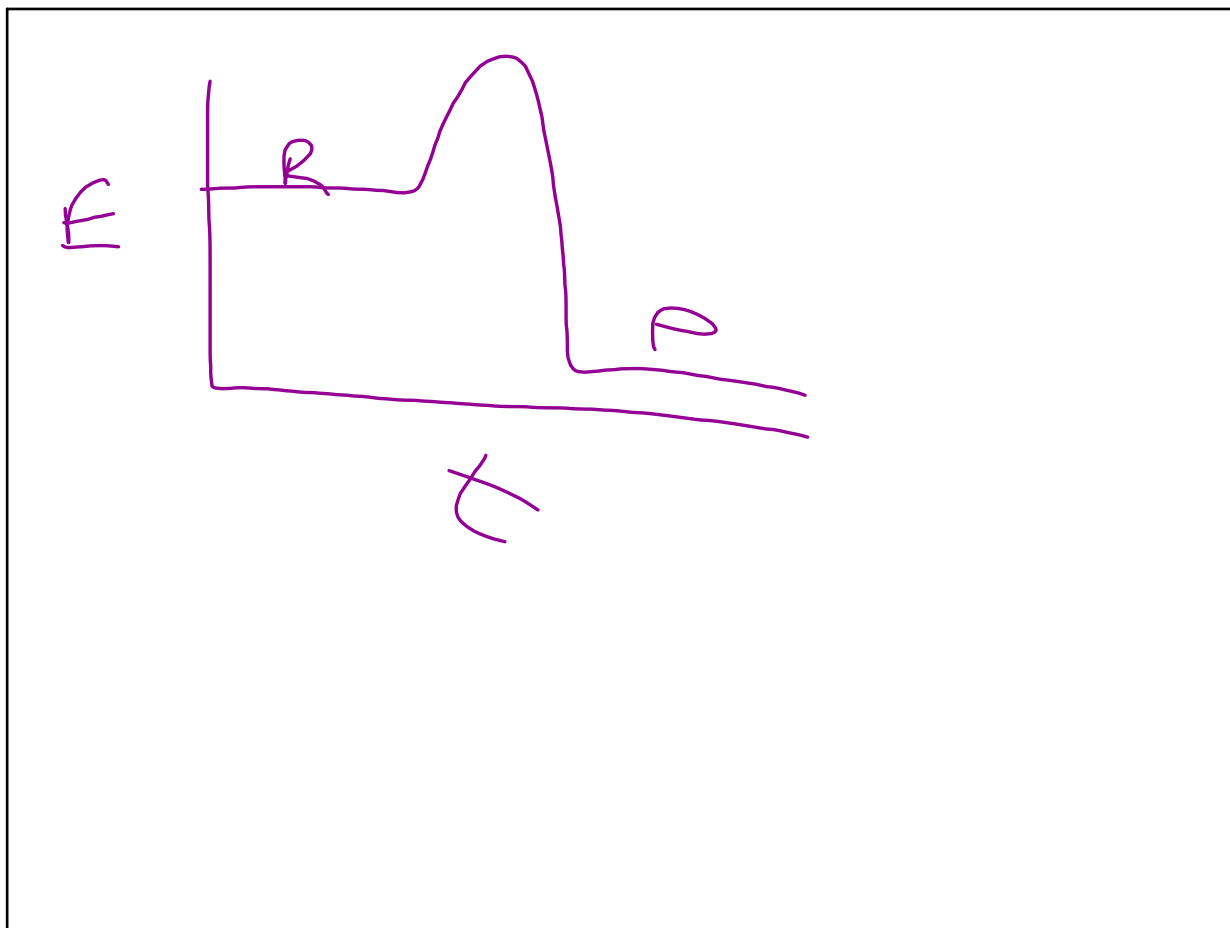
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(16)  $\text{NH}_3 + \text{H}_2\text{S} \rightleftharpoons \text{NH}_4\text{HS}(\text{s})$

(Moles)

I	0.4	0.4	<del>0</del>
D	-x	-x	+x
E	0.4-x	0.4-x	x

Feb 20-7:51 AM



Feb 20-7:58 AM