(12) $PCl_5 \rightarrow PCl_3 + Cl_2$ $K_p = 1.8$

	PCl_5	PCl_3	Cl_2
I	2.74	0	0
D	$-x$	$+x$	$+x$
E	$2.74-x$	x	x

$2.74 - 1.496 = 1.244$

$$K_p = \frac{(PCl_3)(Cl_2)}{(PCl_5)} = \frac{(x)(x)}{2.74-x} = \frac{1.8}{1}$$

$$x^2 + 1.8x - 4.932 = 0$$

$$x = 1.496$$

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(18) $3O_{(g)} + 2NOBr_{(g)} \rightleftharpoons 2NO_{(g)} + Br_{2(l)}$

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(20) $A + 2B \rightleftharpoons C$ K_1

$C \rightleftharpoons D + E$ K_2

$A + 2B \rightleftharpoons D + E$ $K = K_1 * K_2$

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(21) $2SO_2 + O_2 \rightleftharpoons 2SO_3$

3 2

$K_p = 3 \times 10^{24}$

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

$(2-3) = -1$

$3 \times 10^{24} = K_c\left((0.08206)(298)\right)^{-1}$

$\frac{3 \times 10^{24}}{1} = \frac{K_c}{\left[(0.08206)(298)\right]^1}$

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EC

$$\text{Rate} = k\left[Fe(CN_6)\right]^2\left[I^-\right]^1$$

$$k = \frac{1}{M^2 \cdot sec}$$

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