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ANSWERS

$$\begin{aligned} 2. \quad K &= \frac{[\text{NO}(\text{g})]^2 [\text{Cl}_2(\text{g})]}{[\text{NOCl}(\text{g})]^2} \\ &= \frac{(1.5 \times 10^{-3})^2 (0.80)}{(0.3333\ldots)^2} \\ &= 1.6 \times 10^{-5} \end{aligned}$$

$$\begin{aligned} 3. \quad K &= \frac{1}{[\text{O}_2(\text{g})]^3} \quad (\text{solids are not included}) \\ &= \frac{1}{(5.0 \times 10^{-4})^3} \\ &= 8.0 \times 10^9 \end{aligned}$$