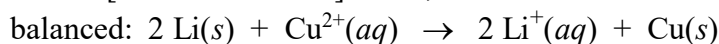


Answers to Chapter 18 Study Questions

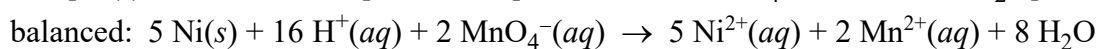
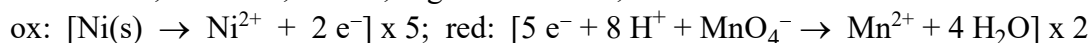
1. a) -3 ; $[x + 3(1) = 0]$ b) 0 c) $+4$; $[x + 2(-2) = 0]$ d) $+5$; $[x + 3(-2) = -1]$

2. a) Br_2 b) I c) Br d) Br_2 e) I^-

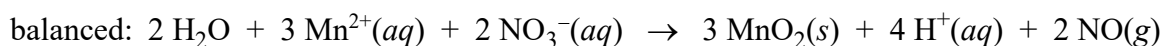
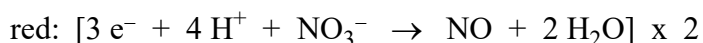
3. a) left: $\text{Li} = 0$, $\text{Cu}^{2+} = +2$; right: $\text{Li}^+ = +1$, $\text{Cu} = 0$



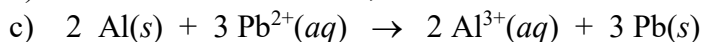
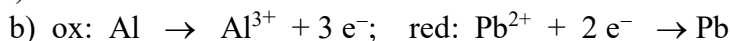
b) left: $\text{Ni} = 0$, $\text{Mn} = +7$, $\text{O} = -2$; right: $\text{Ni}^{2+} = +2$, $\text{Mn}^{2+} = +2$

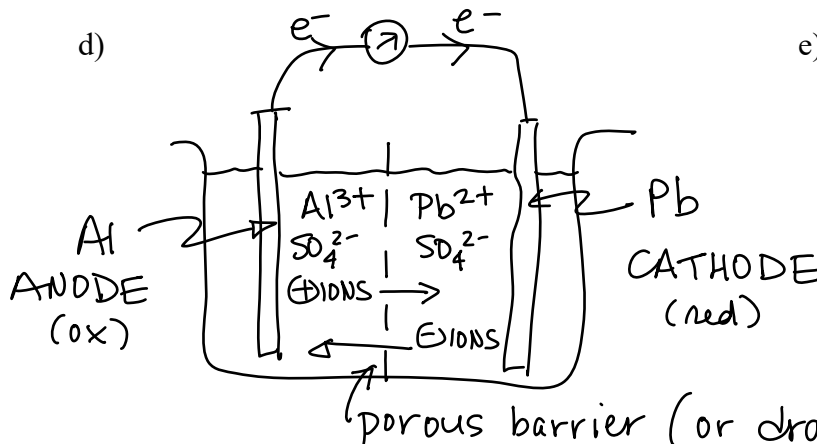


c) left: $\text{Mn}^{2+} = +2$, $\text{N} = +5$, $\text{O} = -2$; right: $\text{Mn} = +4$, $\text{O} = -2$, $\text{N} = +2$



4. a) Al is oxidized. Pb is reduced



d)  e) lead (Pb); since $\text{Pb}^{2+} \rightarrow \text{Pb}$

