

Risultati degli esercizi proposti:

1a) pH = 9.26

2a) 0.28 g

4a)  $3 \text{N}_2\text{O}_4(\text{g}) + \text{Cl}^-(\text{aq}) + 6\text{OH}^-(\text{aq}) \rightarrow 6 \text{NO}_2^-(\text{aq}) + \text{ClO}_3^-(\text{aq}) + 3 \text{H}_2\text{O}(\text{l})$ . La reazione procede come scritta.

5a) 1.8 M

1b) pH = 10.0

2b) 1.0 g

4b)  $\text{Cr}^{3+}(\text{aq}) + \text{MnO}_4^-(\text{aq}) + 4 \text{OH}^-(\text{aq}) \rightarrow \text{MnO}_2(\text{s}) + \text{CrO}_4^{2-}(\text{aq}) + 2 \text{H}_2\text{O}(\text{l})$ . La reazione procede come scritta.

5b) 0.0045M

1c) pH= 4.82

2c) 0.95 g

4c) **Errore nel testo!!**  $\text{I}_2(\text{aq}) + \text{As}(\text{s}) \rightarrow \text{I}^-(\text{aq}) + \text{As}_2\text{O}_3(\text{s})$

$3 \text{I}_2(\text{aq}) + 2 \text{As}(\text{s}) + 6 \text{OH}^-(\text{aq}) \rightarrow 3 \text{I}^-(\text{aq}) + \text{As}_2\text{O}_3(\text{s}) + 3 \text{H}_2\text{O}(\text{l})$ . La reazione procede nel verso opposto.

5c) 0.50 M

1d) pH = 3.77

2d) 1.27 g

4d)  $\text{Cl}_2(\text{g}) + \text{SO}_2(\text{aq}) + 2 \text{H}_2\text{O}(\text{l}) \rightarrow 2 \text{Cl}^-(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) + 4 \text{H}^+(\text{aq})$ . La reazione procede come scritta.

5d) pH = 8.0

1e) pH = 3.92

2e) 0.37 g

4e)  $\text{S}(\text{s}) + 2 \text{NO}_2(\text{g}) + 2 \text{H}_2\text{O}(\text{l}) \rightarrow \text{H}_2\text{S}(\text{aq}) + 2 \text{NO}_3^-(\text{aq}) + 2 \text{H}^+(\text{aq})$ . La reazione procede come scritta.

5e) pH = 5.63

1f) **Errore nel testo!!**  $K_b(\text{NH}_3) = 1.8 \cdot 10^{-5}$

pH = 9.26

2f) 0.98 g

4f)  $\text{Cd}(\text{s}) + 2 \text{NO}_3^-(\text{aq}) + 2 \text{H}_2\text{O}(\text{l}) \rightarrow \text{Cd}(\text{OH})_2(\text{s}) + 2 \text{NO}_2(\text{g}) + 2 \text{OH}^-(\text{aq})$ . La reazione procede nel verso opposto.

5f) pH = 9.20