

Sample Data - Electrochemistry

Voltaic Cells

Data

If a range is given, pick values that fall within the range.

	E_{cell} (measured)
1. $\text{Zn} \text{Zn}^{2+}(1.0 \text{ M}) \text{Cu}^{2+}(1.0 \text{ M}) \text{Cu}$	1.080-1.120
2. $\text{Zn} \text{Zn}^{2+}(1.0 \text{ M}) \text{Cu}^{2+}(0.10 \text{ M}) \text{Cu}$	1.050-1.080
3. $\text{Zn} \text{Zn}^{2+}(0.10 \text{ M}) \text{Cu}^{2+}(1.0 \text{ M}) \text{Cu}$	1.120-1.140
4. $\text{Zn} \text{Zn}^{2+}(1.0 \text{ M}) \text{Pb}^{2+}(1.0 \text{ M}) \text{Pb}$	0.620-0.640
5. $\text{Zn} \text{Zn}^{2+}(1.0 \text{ M}) \text{Pb}^{2+}(0.10 \text{ M}) \text{Pb}$	0.600-0.620
6. $\text{Zn} \text{Zn}^{2+}(0.10 \text{ M}) \text{Pb}^{2+}(1.0 \text{ M}) \text{Pb}$	0.640-0.660
7. $\text{Zn} \text{Zn}^{2+}(1.0 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	1.480-1.520
8. $\text{Zn} \text{Zn}^{2+}(0.10 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	1.520-1.540
9. $\text{Pb} \text{Pb}^{2+}(1.0 \text{ M}) \text{Cu}^{2+}(1.0 \text{ M}) \text{Cu}$	0.460-0.480
10. $\text{Pb} \text{Pb}^{2+}(1.0 \text{ M}) \text{Cu}^{2+}(0.10 \text{ M}) \text{Cu}$	0.440-0.460
11. $\text{Pb} \text{Pb}^{2+}(0.10 \text{ M}) \text{Cu}^{2+}(1.0 \text{ M}) \text{Cu}$	0.480-0.500
12. $\text{Pb} \text{Pb}^{2+}(1.0 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	0.870-0.890
13. $\text{Pb} \text{Pb}^{2+}(0.10 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	0.890-0.910
14. $\text{Cu} \text{Cu}^{2+}(1.0 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	0.380-0.410
15. $\text{Cu} \text{Cu}^{2+}(0.10 \text{ M}) \text{Ag}^+(0.10 \text{ M}) \text{Ag}$	0.410-0.440

Complete the table with the calculated values and then answer the questions.