Year 13 Science: Oxidation-reduction: electrode potentials and cells

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Find the oxidation number of S in $S_2O_3^{2-}$.

2. Calculate E°cell for Mg(s) | Mg^{2+}(aq) || Cu^{2+}(aq) | Cu(s).

3. Will Fe^{3+} oxidise I^-? Give E°cell.

4. In the zinc–copper cell, which electrode is the anode, and which way do electrons flow in the wire?

5. $CuSO_4$(aq) is electrolysed with graphite electrodes. What forms at each electrode?

Fix the mistake

6. Correct this statement: "For Mg + $2Ag^+$, E°cell = 2(+0.80) − (−2.37) = +3.97 V."

7. Correct this statement: "The anode is always the positive electrode."

8. Correct this statement: "Electrons flow through the salt bridge."

9. Correct this statement: "E°cell is positive, so the reaction will happen quickly."