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$$Zn^{2+}_{(aq)} + 2e \rightarrow Zn_{(s)}$$

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$$BrO_{3}^{-} \rightarrow Br^{-}$$
+5
-1

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$$BrO_3^- + 6 e \rightarrow Br^-$$

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$$BrO_3^- + 6 e^- \rightarrow Br^- + 3H_2O$$

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$$0 +1$$

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$$Cl_2 \rightarrow 2ClO^- + 2e^-$$

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$$Cl_2 + 2H_2O \rightarrow 2ClO^- + 4H^+ + 2e^-$$

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Example 3 – Construct the equation for  $Cl_2 \rightarrow ClO^-$  in alkaline conditions

$$Cl_2 + 2H_2O \rightarrow 2ClO^- + 4H^+ + 2e^-$$

OH-ions are present

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Example 3 – Construct the equation for  $Cl_2 \rightarrow ClO^-$  in alkaline conditions

$$Cl_2 + 2H_2O \rightarrow 2ClO^{-} + 4H^{+} + 2e^{-}$$

OH-ions are present

$$4H^+ + 4OH^- \rightarrow 4H_2O$$

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$$Cl_2 - 2H_2O + 4OH^- \rightarrow 2ClO^- - 4H_2O - 2e$$

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$$Cl_2 + 4OH^- \rightarrow 2ClO^- + 2H_2O + 2e^-$$

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