



Oxidation Numbers / States

1 2 3 4 5

Oxidation

Oxidation -

e.g.



+

Reduction -

e.g.

+



Elements

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•

Reduction

Compounds

•

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RULES!

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Deducing Oxidation States

1 2 3 4 5

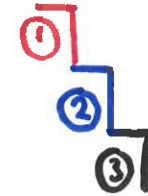
Cl_2	NH_3	MnO_2	Fe_2O_3
HClO	$\text{Cr}_2\text{O}_7^{2-}$	H_2SO_4	HPO_3^{2-}
V^{3+}	S_8	$\text{Ca}(\text{VO}_3)_2$	BO_3^-
H_2O_2	MnO_4^-	Mg_3N_2	$\text{Pt}(\text{H}_2\text{O})_5(\text{OH})^{2+}$



Redox Equations

1 2 3 4 5

Disproportionation



_____ :



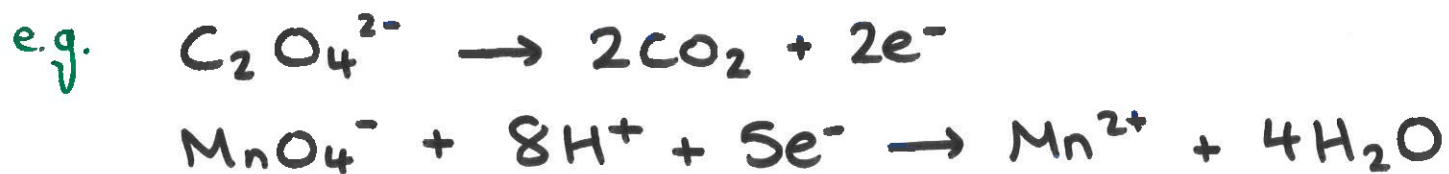
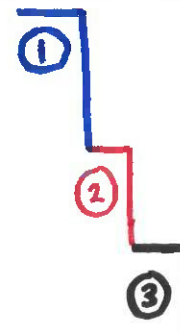
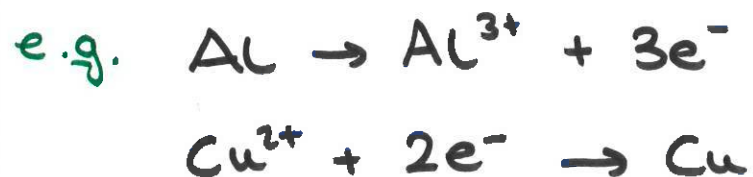
Half Equations





Combining Half Equations

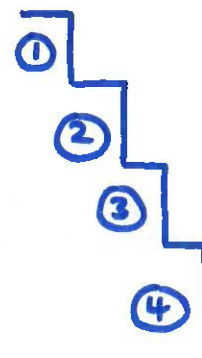
1 2 3 4 5





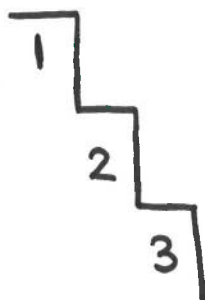
Redox in Acidic Conditions

1 2 3 4 5





Ionic Equations



e.g₁ 1.

2.

3.

e.g₂ 1.

2.

3.