

Electrochemistry

Assign oxidation numbers for each of the atoms in the following compounds:

Species	Oxidation Number	Species	Oxidation Number
HClO		KClO ₃	
MnO ₂		PbO ₂	
PbSO ₄		K ₂ SO ₄	
NH ₄ ⁺		Na ₂ O ₂	
FeO		Fe ₂ O ₃	
NaIO ₄		Fe ₃ O ₄	
Cr ₂ O ₇ ²⁻		MnO ₄ ²⁻	
NO ₃ ⁻		ClO ₃ ⁻	

Assign oxidation numbers for all atoms in the following table, determine which element has a change in its oxidation number, and state whether it is oxidation or reduction.

Reactant	Product	Change in Oxidation Number	Oxidation	Reduction
MnO ₄ ⁻	MnO ₄ ²⁻			
K	K ⁺			
N ₂	NH ₃			
NH ₃	N ₂ O			
P ₄ O ₁₀	P ₄ O ₆			
SO ₄ ²⁻	SO ₃ ²⁻			
HClO ₄	HCl			
O ₂	O ²⁻			
Cr ₂ O ₇ ²⁻	Cr ³⁺			

