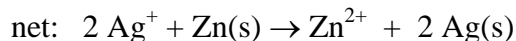
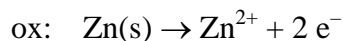
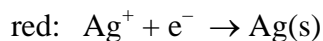
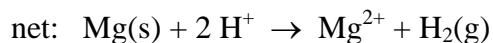
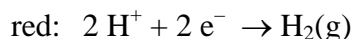
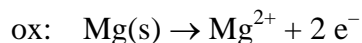


**Answers: Practice balancing Oxidation-Reduction (redox) equations**      **Chemistry BC2001x**

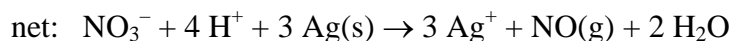
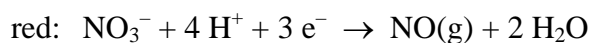
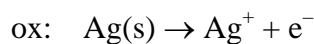
**1) A zinc rod dipped in silver nitrate solution becomes coated with silver metal.**



**2) Magnesium metal dissolves in strong acid**

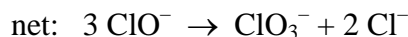
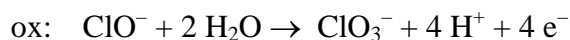
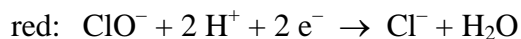


**3) Silver metal, which does not dissolve in  $\text{H}_2\text{SO}_4$ , does dissolve in dilute  $\text{HNO}_3$**

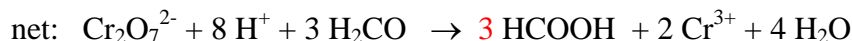
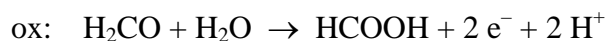
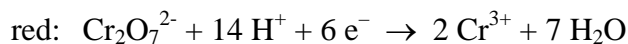


[you must memorize that *dilute*  $\text{HNO}_3$  produces NO in redox reactions]

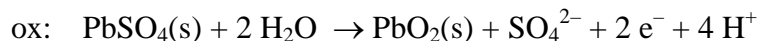
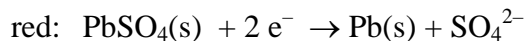
**4)  $\text{ClO}^-$  disproportionates to  $\text{Cl}^-$  and  $\text{ClO}_3^-$  in acid**



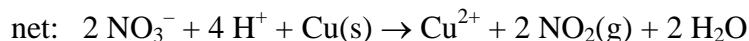
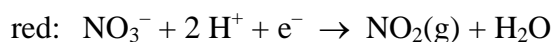
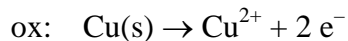
**5) Dichromate ( $\text{Cr}_2\text{O}_7^{2-}$ ) oxidizes formaldehyde ( $\text{H}_2\text{CO}$ ) to formic acid ( $\text{HCOOH}$ ) in acid, forming  $\text{Cr}^{3+}$**



**6)  $\text{PbSO}_4$  disproportionates to  $\text{Pb(s)}$  and  $\text{PbO}_2$  {automobile battery}**

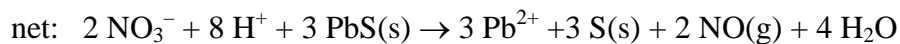
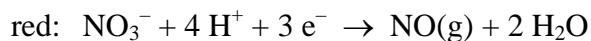


**7) Copper metal is oxidized to produce Copper II in concentrated nitric acid**



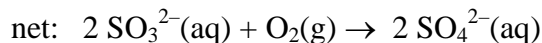
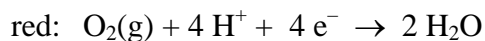
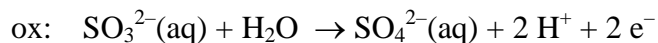
[you must memorize that *concentrated*  $\text{HNO}_3$  produces  $\text{NO}_2(\text{g})$  in redox reactions]

**8) Lead sulfide, insoluble in concentrated HCl, dissolves in dilute nitric acid**



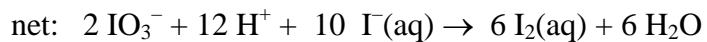
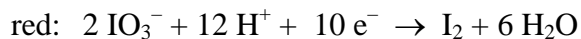
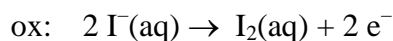
[since HCl does not dissolve the salt, we know that nitrate must be the active ingredient.]

**9) Sulfite ion is air oxidized to sulfate ion (in acidic solution)**



[in air the only available oxidizing agent is oxygen.]

**10) iodate and iodide form iodine in acid**



[this reaction was used in the common ion experiment]