REDOX REACTIONS

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FINDING OXIDATION NUMBERS

Oxidation Numbers in Charged Compounds

Example 3: MnO_{A}^{-}

Step 1: Identify the oxidation number that is known

Oxygen has an oxidation number of -2

$$MnO_4^-$$

Step 2: Since we do not know the oxidation number of Mn we have to do some math to figure it out.

Let's put this into an algebraic equation and solve for x or the oxidation number of Mn.

Mn
$$O_4$$
The total charge of the compound is -1, so we set the equation equal to the total charge
$$x + (-8) = -1$$

$$+8$$
Solve for x by adding 8 to both sides
$$x = +7$$

Oxidation numbers: