Unit 5 - Topic 3Changes in Oxidation States

Assigning Oxidation States

Use the rules and examples given in the video to assign oxidation numbers to the elements in each substance below.

1. Chlorine in KClO₄

5. Sulfur in Na₂SO₃

2. Nitrogen in Ba(NO₃)₂

6. Chromium in CaCrO₄

- 3. Phosphorus in $Ca_3(PO_4)_2$
- 4. Manganese in LiMnO₄

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For each of the following reactions, assign oxidation states to ALL of the elements ("species"), draw on arrow for the species being reduced (label the arrow REDUCED), and draw a second arrow for the species being oxidized (label the arrow OXIDIZED).

1. $2HNO_3 + 6HI \rightarrow 2NO + 3I_2 + 4H_2O$

2. $3H_2S + 2HNO_3 \rightarrow 3S + 2NO + 4H_2O$