1.) Label the oxidation numbers in each compound

<table>
<thead>
<tr>
<th>Compound</th>
<th>Oxidation Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td></td>
</tr>
<tr>
<td>SO₃</td>
<td></td>
</tr>
<tr>
<td>PbCl₂</td>
<td></td>
</tr>
<tr>
<td>PbO₂</td>
<td></td>
</tr>
</tbody>
</table>

CaCO₃

2.) Balance the Redox Reaction

Zn + NO₃⁻ ----> Zn²⁺ + NO₂

3.) Identify the oxidizing and reducing agent in the following reactions.

2H₂ + O₂ ----> 2H₂O
4.) Discuss whether the reaction will take place or not

\[
\text{Al(s) + Zn(NO}_3\text{)}_2 \text{ (aq)} \rightarrow \text{HNO}_3 \text{ (aq) + Au (s)}
\]

5.) A container holds 500. mL of CO2 at 20.° C and 742 torr. What will be the volume of the CO2 if the pressure is increased to 795 torr?

6.) A gas tank holds 2785 L of propane, C3H8, at 830 mm Hg. What is the volume of the propane at standard pressure?
7.) A container holds 50.0 mL of nitrogen at 25° C and a pressure of 736 mm Hg. What will be its volume if the temperature increases by 35° C?

8.) A balloon has been filled to a volume of 1.90L with 0.0920mol of helium gas. If 0.0210mol of additional helium is added to the balloon while the temperature and pressure are held constant, what is the new volume of the balloon?

9.) If we want to decrease pressure of gas, placed in a container having constant volume, from 4P to P how much we should change the temperature of it. Its current temperature is 127 °C.