Homework

$2Al_{(s)} + 3Cl_{2(g)} \rightarrow 2AlCl_{3(s)}$ $\Delta H = ?$

① $2Al_{(s)} + 6HCl_{(aq)} \rightarrow 2AlCl_{3(aq)} + 3H_{2(g)}$ $\Delta H = -1049 kJ$

③ x 3

⑤ $3H_{2(g)} + 3Cl_{2(g)} \rightarrow 6HCl_{(g)}$ $\Delta H = -5535 kJ$

Rev ④ x 2

⑥ $2AlCl_{3(aq)} \rightarrow 2AlCl_{3(s)}$ $\Delta H = 646 kJ$

② x 6

⑦ $6HCl_{(g)} \rightarrow 6HCl_{(aq)}$ $\Delta H = -448.8 kJ$

① + ⑤ + ⑥ + ⑦

$2Al_{(s)} + 3Cl_{2(g)} \rightarrow 2AlCl_{3(s)}$ $\Delta H_r = -6386.8 kJ$

$$6\,C_{(s)} + 6\,H_{2\,(g)} + 3\,O_{2\,(g)} \rightarrow C_6H_{12}O_{6\,(s)} \qquad \Delta H^\circ = ?$$

$$C_6H_{12}O_{6\,(s)} + 6\,O_{2\,(g)} \rightarrow 6\,CO_{2\,(g)} + 6\,H_2O_{(l)} \qquad \Delta H^\circ = -2802.7\,kJ$$

$$H_{2\,(g)} + \tfrac{1}{2}O_{2\,(g)} \rightarrow H_2O_{(l)} \qquad \Delta H^\circ = -285.8\,kJ$$

$$C_{(s)} + O_{2\,(g)} \rightarrow CO_{2\,(g)} \qquad \Delta H^\circ = -393.5\,kJ$$

Worksheet