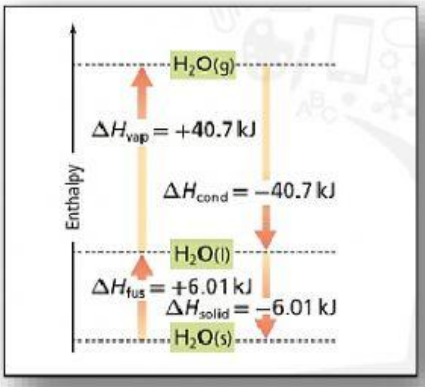
Thermochemical equations

Section 3

Q1 Use information from figure to Calculate how much heat is required to vaporize 4.33 mol of water at 100 °C ?



Q2 Choose the correct answer :

A) Number of moles of evaporated ethanol (C_2H_5OH), if the amount of required heat to evaporate equal 200.72 KJ.

$C_2H_5OH_{(l)} \rightarrow C_2H_5OH_{(g)}$ $\Delta H^o_{vap} = 38.6$ KJ/mol

a) 7.75×10^4 mol b) 0.192 mol c) 5.20 mol d) 7.75×10^{-4} mol

B) Use the following reaction to calculate amount of heat released from burning 9.01 g of Glucose ($C_6H_{12}O_6$) .

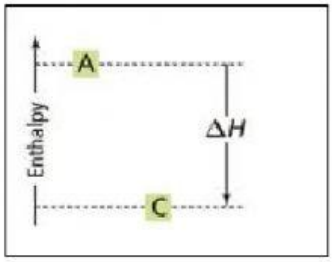
$C_6H_{12}O_{6\,(s)} + 6O_{2(g)} \rightarrow 6CO_{2(g)} + 6H_2O_{(l)}$ $\Delta H^o_{comb.} = -2808$ KJ/mol

a) 280 KJ b) 210 KJ c) 14.0 KJ d) 140 KJ

C) From the figure identify which answer is **NOT** correct .

a) Products have lower energy than the reactants.

b) $\Delta H = H_C - H_A$

c) $\Delta H = H_A - H_C$

d) The reaction is exothermic .