HEAT OF DISPLACEMENT

1. What is the meaning of heat of displacement?

Heat _____ when _____ of _____ is _____ from its

_____ solution by _____ _____ metal

2. In an experiment, 25 cm^3 of 0.2 $moldm^{-3}$ of silver nitrate solution was reacted with 0.7 g copper powder. The copper powder used is more than what is required. The reaction produced a rise in temperature of 3.5°C.
[*Density of solution : 1.0 g cm^{-3} ; specific capacity aqueous solutions ; 4.2 J g^{-1} $^oC^{-1}$*]

a) Calculate the increase of temperature

°C

b) What is the amount of heat released in the reaction?

Q = ( ) ( ) ( ) = J = kJ

c) Calculate the number of mol of silver ion, Ag^+

_____x_____ = mol

d) Write the chemical equation of the reaction

+ → + ( )

e) Construct an ionic equation for the reaction

+ → +

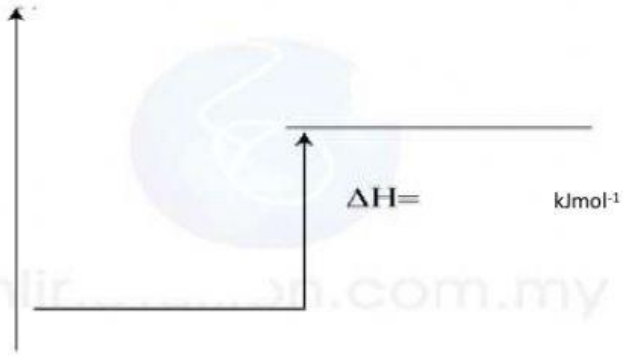
f) Calculate the heat of displacement for this experiment

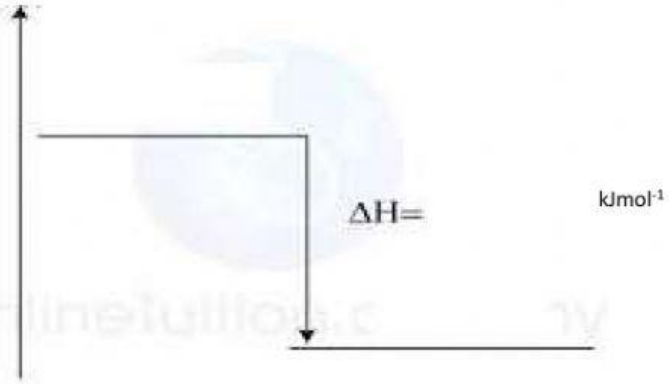
ΔH = _____ = $kJmol^{-1}$

g) Tick at the right energy level diagram. Complete the energy level diagram.

LIVEWORKSHEETS

(write 0 for the blank box that not chosen)





i) State one of the observation for this experiment instead of the increasing of the temperature

solution change to solution

LIVEWORKSHEETS