Solution of the sheet No. 2

Q1//Solution

$P_A+(h+x)\ \gamma_w-S\ \gamma_w h+\ \gamma_w y=P_B$

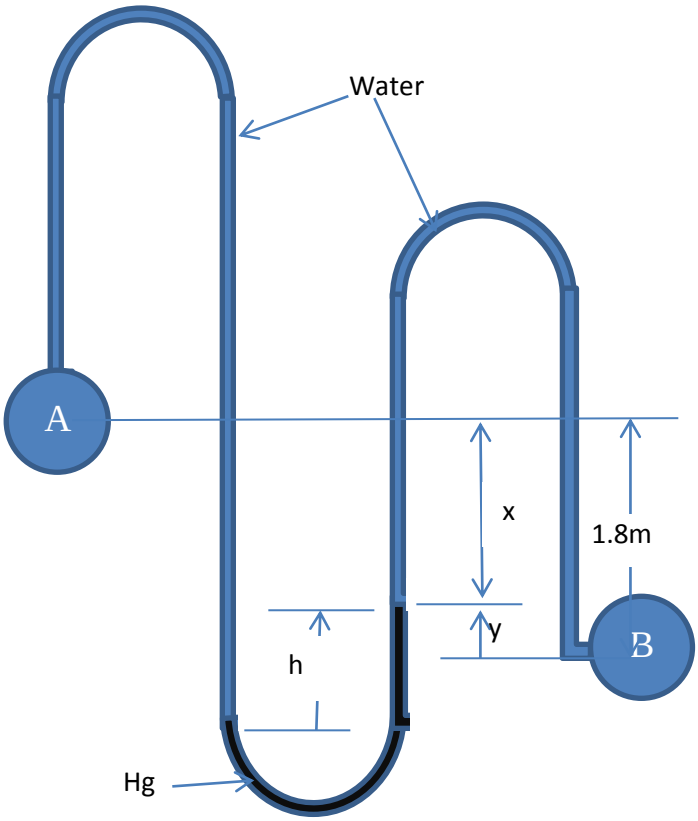
$P_A+h\ \gamma_w+x\ \gamma_w-S\ \gamma_w h+\ \gamma_w y=P_B$

$P_A+h\ \gamma_w\ (1-S)+\ \gamma_w(y+x)=P_B$

And $x+y=1.8$

$h=(P_A-P_B-1.8\ \gamma_w)/(\ \gamma_w(1-S))=1.356m$

Note s=13.6



Q2//solution

$P_A-xS\ \gamma_w=P_v$

$(34000+100000)-x*0.9*9810=11.56$

$X=13.87m$

$P_A+yS\ \gamma_w+1.2\ S\ \gamma_w-13.6*\ 1.2\ \gamma_w=0$

$Y=13.08m$