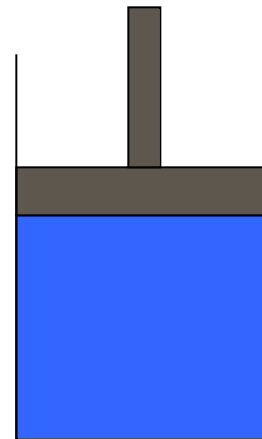# Q1 - Answer = c
Q2 - Problem A - Last name A-K

A container with 0.5 kg of water is fitted with a piston. If the water is turned to steam so that the volume changes from 0.5×10^{-3} m^3 to 0.9×10^{-3} m^3, how much work is done by the piston against the atmosphere?(Atm. Press. = 1.01×10^5 Pa.)

A. 90.9 J

B. 60.6 J

C. 4.04 J

D. **40.4 J**

E. 50.5 J

$W = P\,V;$

$V = (0.9-0.5) \times 10^{-3}$

$= 0.4 \times 10^{-3}$

$W = 1.01 \times 10^5 \times 0.4 \times 10^{-3}$

$= 40.4$ J

Q1 - Answer = c
Q2 - Problem B - Last Name L-Z

▎ A container with 0.3 kg of water is fitted with a piston. If the water is turned to steam so that the volume changes from 0.5 $x10^{-3}$ m³ to 1.4 $x10^{-3}$ m³, how much work is done by the piston against the atmosphere?(Atm. Press. = 1.01 x 10^5 Pa.)

A. 9.09 J

B. 30.3 J

C. **90.9 J**

D. 50.5 J

E. 140 J

$W = P \, \Delta V;$

$\Delta V = (1.4 - 0.5) x10^{-3}$

$= 0.9 x10^{-3}$

$W = 1.01 x10^5 x 0.9 x10^{-3}$

$= 90.9$ J