

# Physics 231 - 12-Nov-99



- Announcements
- First Law of Thermodynamics
- Volume Change and Work
- Isobaric Process
- Isothermal Process
- Isometric Process
- quiz

# First Law of Thermodynamics



# Isobaric Process



## ■ Work and Isobaric Process

# Other Processes



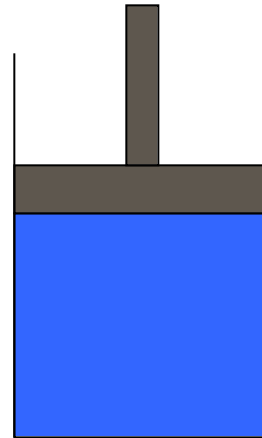
- Isothermal Process
- Isometric Process

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  $0.5 \times 10^{-3} \text{ m}^3$  to  $0.9 \times 10^{-3} \text{ m}^3$ , how much work is done by the piston against the atmosphere? (Atm. Press. =  $1.01 \times 10^5 \text{ Pa}$ .)

- A. 90.9 J
- B. 60.6 J
- C. 4.04 J
- D. 40.4 J
- E. 50.5 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  $0.5 \times 10^{-3} \text{ m}^3$  to  $1.4 \times 10^{-3} \text{ m}^3$ , how much work is done by the piston against the atmosphere? (Atm. Press. =  $1.01 \times 10^5 \text{ Pa}$ .)

- A. 9.09 J
- B. 30.3 J
- C. 90.9 J
- D. 50.5 J
- E. 140 J

