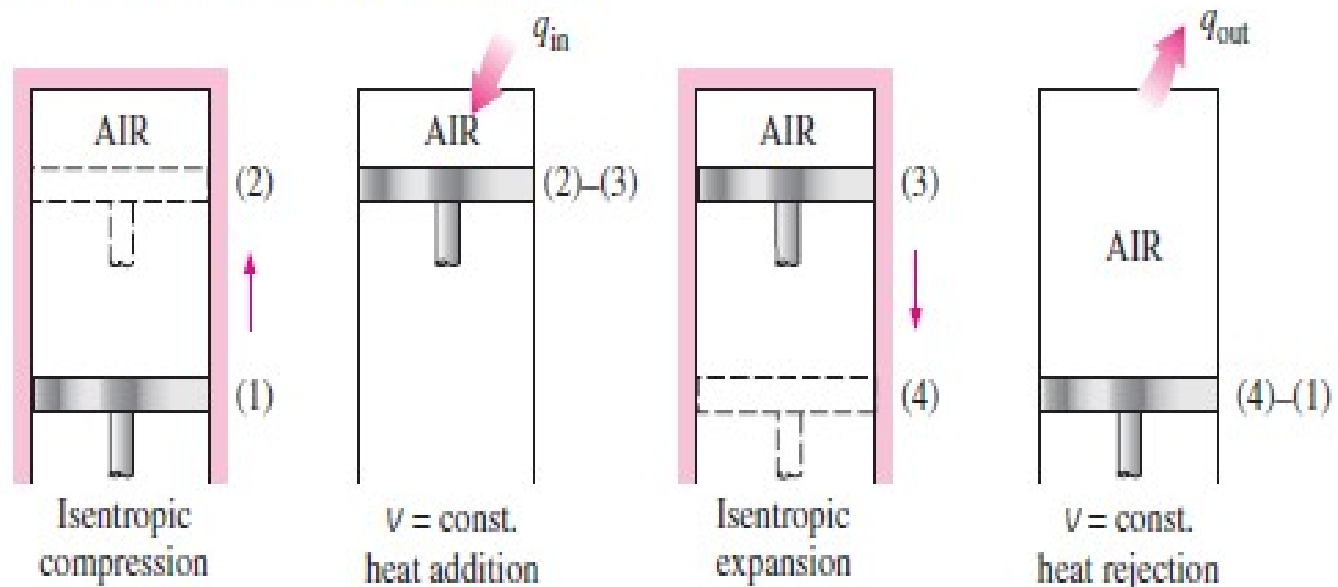
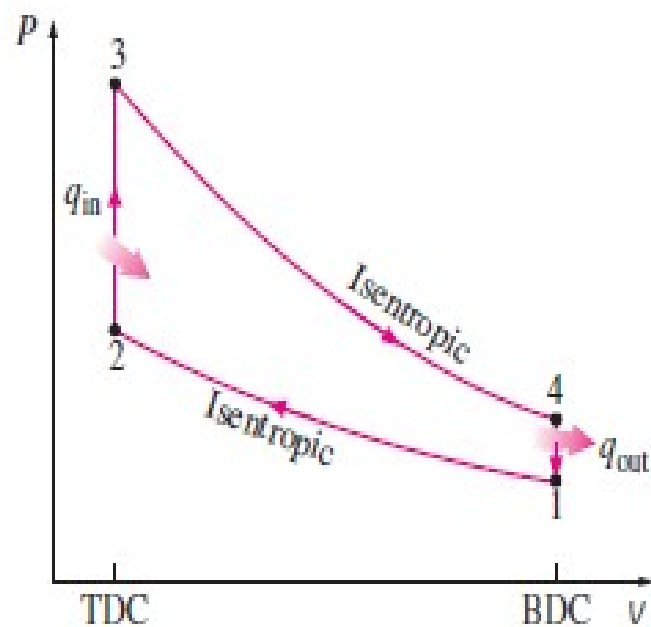


(a) Actual four-stroke spark-ignition engine



(b) Ideal Otto cycle