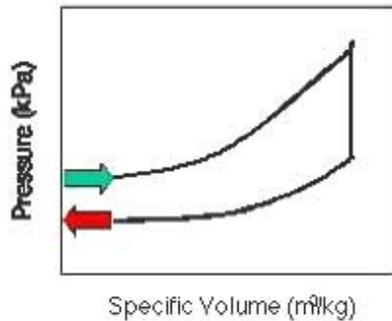
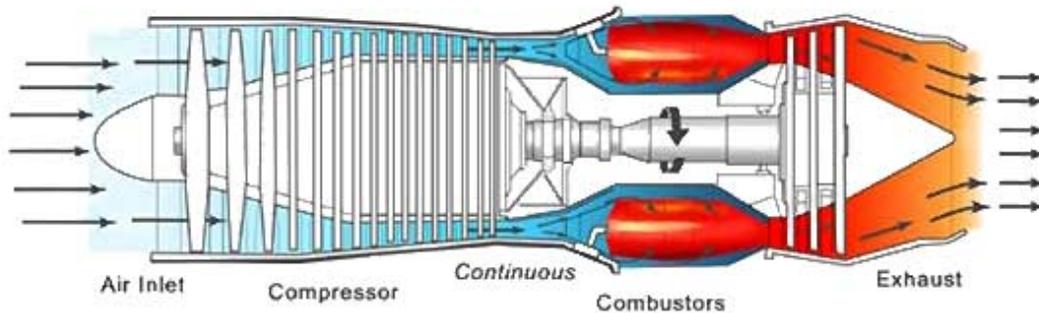
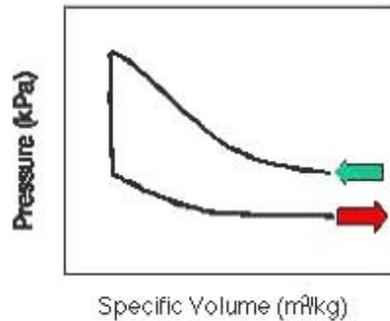


## Chapter 2 Question #6

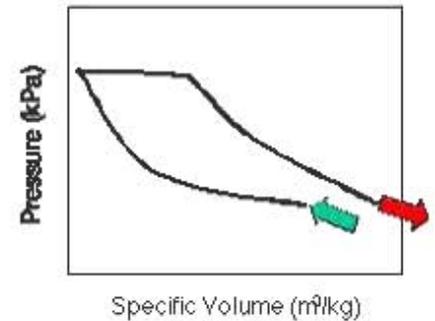
Which thermodynamic diagram best represents the processes that the gas undergoes as it passes through a gas turbine engine?



1)



2)



3)

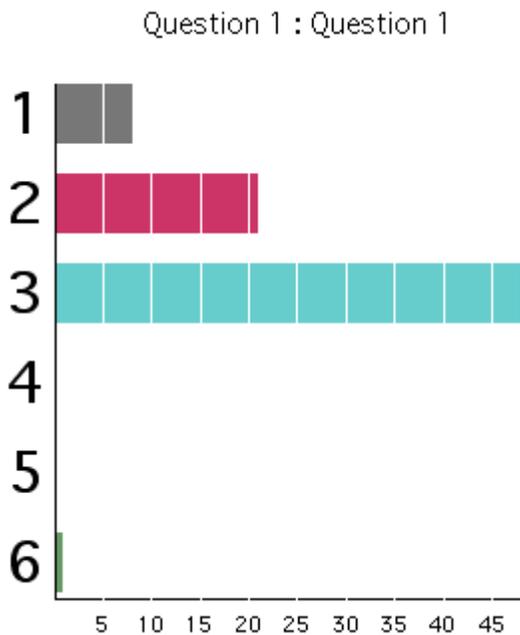
LO#5

**Chapter 2 Question 6 Answer:**

**(3)**

I am assuming that you are not familiar with gas turbine engines at this part of the course. Thus you are required to use a little physical intuition. First one would expect the pressure to increase and the volume to decrease through the compressor. All of the examples meet this test. Second, one would expect the energy of the gas to increase upon passing through the combustor. Neither of the first two drawings suggest this (both show the pressure dropping at constant volume)--this alone would cause you to chose (3). Finally, one would expect the exhaust of the engine to be hotter than the inlet flow, and only example three meets this final test (at the same pressure, the volume is less at the inlet--meaning it must be colder).

Class Response (2003):



Class Response (2002):

Question 2 : Question 2

