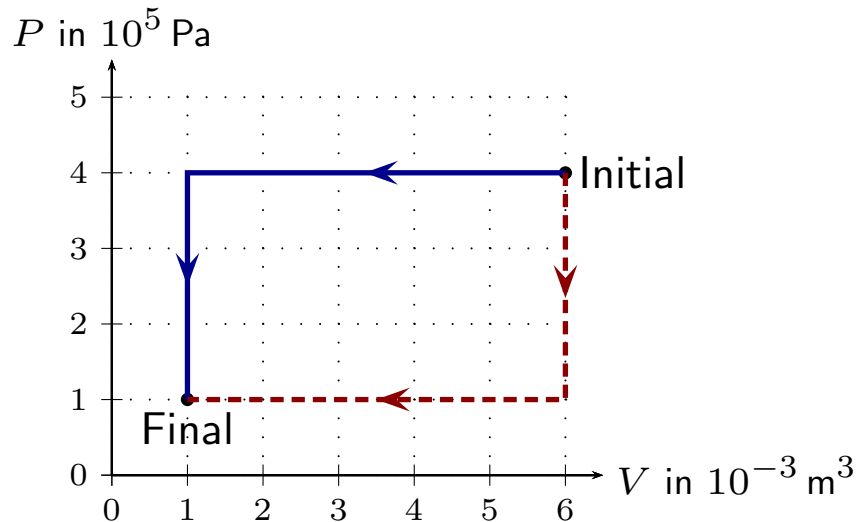


Question 1

A gas undergoes one of the two processes that takes it from the initial to the final state as illustrated. Denote the process indicated by the solid line by A and that by the dashed line by B.

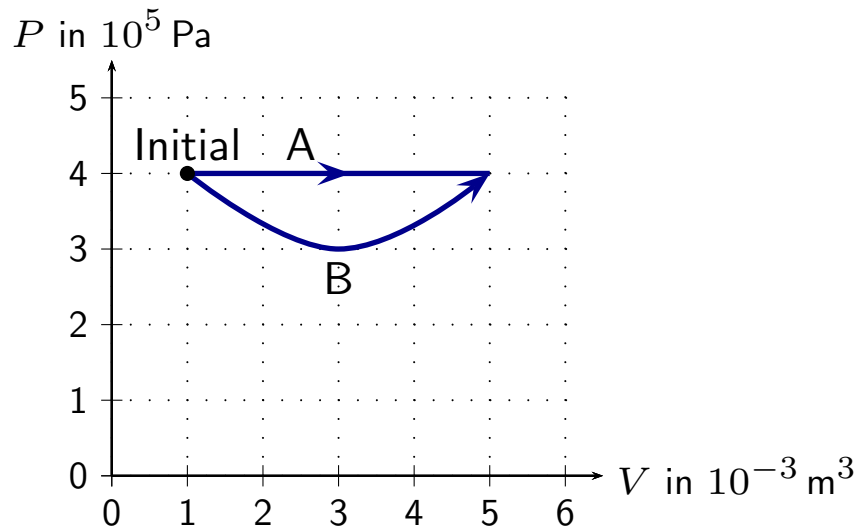


Which of the following best relates the work done on the gas during these processes?

1. $W_A = W_B$
2. $W_A < W_B$
3. $W_A > W_B$

Question 2

Two identical samples of an ideal gas each undergo one of the two processes as illustrated.



Which of the following is true?

1. The change in internal energy is the same for both and the work done on the system is the same for both.
2. The change in internal energy is different for the two and the work done on the system is the same for both.
3. The change in internal energy is the same for both and the work done on the system is different for the two.
4. The change in internal energy is different for the two and the work done on the system is different for the two.

Question 3

An ideal gas undergoes a process during which its volume stays constant but its pressure increases.

Which of the following is true for this process?

1. $Q = 0$
2. $Q < 0$
3. $Q > 0$