



## 10.C.1

Which of the following measures can be taken to increase the efficiency of a simple Brayton cycle? 1: Increase the pressure ratio 2: Decrease the temperature of the turbine inlet 3: Decrease the friction in the turbine 4: Use a higher mass flow

Answer: 1 and 3

Explanation: 1: Increasing the pressure ratio will increase the efficiency  
2: Decreasing the temperature of the turbine inlet results in a lower efficiency  
3: Decreasing the friction in the turbine results in a higher efficiency  
4: The mass flow has no influence on the efficiency, it only determines the power output and input: e.g. mass flow times specific work output gives the power output. The efficiency is not affected by this as the power input scales with the same mass flow.