

ÇANKAYA UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
ME211 THERMODYNAMICS I
Quiz #1 Solution

- 2) (50 p) Carbon dioxide contained in piston-cylinder device is compressed from 0.3 to 0.1 m^3 . During the process, the pressure and volume are related by $P=aV^{-2}$, where $a=8 \text{ kPa m}^6$. Sketch the **process diagram** and calculate the work done on carbon dioxide during this process.

Solution:

