Chapter 6 Question #1

Two kg/s of fluid flows at a steady rate into and out of a system. The internal energy, velocity, and height of the entering streams are 400 kJ/kg, 100 m/s, and 300 m. For the exit streams these quantities are 396 kJ/kg, 1 m/s, -10 m. Also, 4070 W of heat are removed from the system. At what rate does the system do work? (Assume g=9.8 m/s^2)

1) 28145 J/s
2) 20005 J/s
3) -28145 J/s
4) 12013 J/s
5) 7967.5 J/s
6) I am not sure

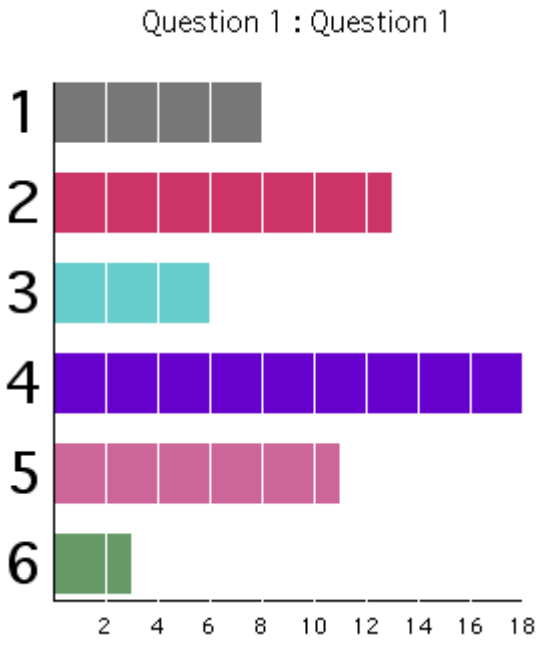
LO#4

Chapter 6 Question 1 Answer:

(2) 20005 J/s

If you are having trouble getting this, remember the sign on the heat is (-), also make sure you have all the inlet and outlet quantities assigned appropriately and that the units are consistent throughout.

Class Response (2003):



Class Response (2002):