

Midterm 1 extra practice problems

These problems are meant to provide opportunities for supplemental practice in addition to the homework problems, quiz problems, and examples from the lectures/textbook. Numerical answers are provided to check your solutions.

- Koretsky 2.24
 - Answers:
 - b) $W = -940 \text{ J}$
 - c) $Q = 940 \text{ J}$
- Koretsky 2.41
 - Answers:
 - $500 \text{ }^\circ\text{C}$, 1200 kPa , 0.167 m
- Koretsky 2.49
 - Answers:
 - $Q = 228 \text{ kJ}$
- Koretsky 3.22
 - Answers:
 - For Problem 2.28, $\Delta S_{\text{univ}} = 1.24 \text{ J/K}$
 - For Problem 2.29, $\Delta S_{\text{univ}} = 0.004 \text{ J/K}$
- Koretsky 3.41
 - Answers:
 - a) 650 K
 - b) $-55.1 \text{ kJ/s} = -55.1 \text{ kW}$
 - c) -78.7 kW
 - d) 819 K
- Koretsky 3.44
 - Answers:
 - 51.2 J/K