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Physics 2C, Winter 2020

**Reading Assignment due Thursday 2/13:** Submit via Gradescope by 11:30am

1. Stop-to-Think 21.1 on page 574 of the textbook. In addition to answering the question in the textbook, for each of the four heat engines, calculate the efficiency according to equation (21.6).
2. There are several equivalent definitions of the 2nd law of thermodynamics. Write down three of them that were discussed in sections 21.1-21.2.
3. Stop-to-Think 21.3 on page 580 of the textbook. In particular
  - (a) What is the thermal efficiency of this heat engine?
  - (b) Note that the textbook is using  $Q_C$  for both engines and refrigerators. Explain what is similar and what is different about the two uses.

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**For extra practice (not due):** From Chapter 21 of Knight, 4th edition: Conceptual Questions: 1-5. Exercises: 1-5, 9-21.