





Physics 121. April 10, 2008.

- Homework set # 8 is due on Saturday morning, April 12, at 8.30 am.
- Homework set # 9 is now available and will be due on Saturday morning, April 19, at 8.30 am. This assignment only contains WeBWorK problems.
- Requests for regarding part of Exam # 1 and # 2 need to be given to me by April 17. You need to write down what I should look at and give me your written request and your blue exam booklet(s).

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- At this point we have finished our discussion of the material that will be covered on Exam # 3 (Chapters 10, 11, 12, and 14).

- A few suggestions on how to prepare for the exam:
 Look at the results of exams 1 and 2 and see where you went wrong.
 Review the solutions to the homework assignments. Did you find your solution using the easiest approach?
 Complete the practice exam (without using the book as a reference) as a way to judge how well prepared you are for the exam.
 Use the study guide (quizzes, worked out problems, etc.).
 Practice problem recognition using the end-of-the-chapter problems.
 Seek help when you need help, but realize that there are limits to what the Physics 121 staff can do (we can not meet 4 hours a week with each of you individually).

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Thermodynamic variables. Measuring temperature. • In order to measure the temperature of a system, we need to bring the thermometer in contact with the system. • We must wait long enough to ensure that the thermometer

- We must wait long enough to ensure that the thermometer and the system are in thermal equilibrium (have the same temperature).
- This approach relies on the zeroth law of thermodynamics:
- Temperature is a property of a body, and two bodies are in thermal equilibrium if their temperatures are equal.
- If the thermometer initially has a different temperature than the system, energy will flow to provide thermal equilibrium and the temperature of both systems will change!
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Thermodynamic variables. Measuring temperature.

• In order to measure temperature we must:

- Agree on a standard reference point to which we assign a certain temperature.
 Agree on a unit.
- Agree on a unit.
 Agree on a standard thermometer against which all other thermometers can be calibrated.
- The unit of temperature will be the Kelvin (K).
- The standard reference point is the triple point of water (T = 273.16 K).

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