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2.007 Design and Manufacturing I  
Spring 2009

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2.007 Design and Manufacturing 1

## Homework #4 Pneumatics, CAD, & Gears

Date Issued: Tuesday 30 April, 11AM

Date Due: Wednesday May 13, 5PM

As described in the course policies document, this is one of four homeworks you will complete in this course. Each homework counts as 5% of your total grade.

The purpose of this homework is to strengthen your knowledge of the materials covered under exam #2.

You do not have to do this homework at all. If you hand in nothing, your grade for the assignment will be the same as your exam #2 grade.

If you decide to do this homework, pick from 1 to 5 topics on exam #2 that you don't currently understand fully.

- a) Go learn more about that topic. For example, if the exam solution states that a differential gear on a rear wheel drive vehicle has 2 degrees of freedom, you might be surprised by that or think it sounds wrong. So you go down to the lab and run some experiments with the differential there. Then you read some articles on differential gears. Eventually, you may decide you are comfortable with it.
- b) Write about what you did and/or what you learned. In about one page of text and graphics, explain what you did. Discuss the relevance of the knowledge to the exam and to machine design more generally.
- c) Attach your work to your exam #2. Place it so that it's relatively clear what part of the exam you were addressing.
- d) Turn in your work. Place the graded exam #2 (now with extra material attached) in the bin outside 3-449 marked "HW#4".