

# Physics, Preparation for Friday, Nov. 10

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## Read N5 from *Six Ideas*

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## Office Hours

I have added office hours starting at 10am on Monday and Thursday till whenever people leave. If nobody shows up in the first half hour, I will likely go off and do other things. So come by between 10:00 and 10:30 and stay as long as you like. *I still remain available at most other times.*

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## Topics

1. Kepler's Third Law applied to Earth, Jupiter, and Venus
  2. The behavior of gyroscopes
  3. Discussion of N5B.7 (the inclined plane problem)
  4. A simple explanation of the Fundamental Theorem of Calculus — I'm saving the somewhat more rigorous explanation for next time
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## For Problem Set #9

1. N4M.2, p. 68, A good statics problem which I swapped in for N4M.5, because N4M.5 was too much like the next problem N4R.1
2. N4R.1, p. 69, A torque balancing problem
3. N5B.7, p. 83, A basic plug-in for a frictionless cart on an inclined plane
4. N5M.1, p. 83, Requires use of the concept of the coefficient of static friction, quite a bit like Example N5.4, but first you have to estimate what fraction of the car's weight is on its rear wheels (approximately 40-45% for front-engine cars)