

Physics, Preparation for Friday, Nov. 17

No New Reading in *Six Ideas*

Consolidate existing material through N6 by reviewing missed problems, in-class demonstrations, and handouts.

Topics for Class

We'll just carry forward all the things we did not have time for in Tuesday's class. See ***bold, italicized*** items on following sheet.

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.*

For Problem Set 10

More problems to reinforce N4

1. N4M.5, p. 68
2. N4M.8, p. 68

You guys pretty much all got the N5 problems right, so we don't need more of those.

A fast, easy problem and a fun, hard problem from N6

3. N6T.9, p. 98
4. N6A.1, p. 101

In-Class Topics, Tuesday, Nov. 14

Bold and italicized items we did not have time for

Angular Momentum Presentation/Demonstration

1. Emma
 - a. Real inertial navigation systems in airplanes, including pitch, yaw, and roll.
 - b. What torque does it take to roll (not pitch or yaw) the front wheel of a bicycle?
2. We got out the gyroscope again to support what Emma presentation.

Need more Clarity on Statics

3. Problems 1 and 2 (both statics problems) on Problem Set 9 are revealing misunderstandings about the careful application of forces and torques

Kinematic Chain Presentations (some carried forward from Nov. 7)

4. Rebecca & Jack, N3R.2, p. 52, a graphical solution and an algebraic solution are both possible
- 5. Brian, Theory Presentation, The Fundamental Theorem of Calculus**
- 6. Brian, Presentation/Derivation, Uniform Circular Motion, including application to solar system orbits**

N5 Presentation

7. Trey, N5M.12, p. 83, the drag coefficient

N6 Presentation

- 8. Will & Hexi, N6B.7, p. 99, lots of practice making free-body diagrams**

N7 Decided to Postpone to Monday

- 9. Brian, will introduce unit vectors and some other N7 concepts**

Plan Problem Set 10

10. Problem Set 10, due Friday, 2023-10-17
 - a. More problems to reinforce N4
N4M.5, N4M.8
 - b. An easy and hard problem from N6
N6T.9, N6A.1