

Physics 262: Problem Set #5

These problems are due at the end of the day on Friday, Feb 8.

1. Wednesday session worksheet
2. Kleppner and Kolenkow, problem 6.36, pg. 285.
3. Kleppner and Kolenkow, problem 7.11, pg. 337.
4. Kleppner and Kolenkow, problem 8.2, pg. 372.
5. Kleppner and Kolenkow, problem 8.4, pg. 373.
6. Kleppner and Kolenkow, problem 8.5, pg. 373.
7. Kleppner and Kolenkow, problem 8.7, pg. 375.
8. (BONUS) Re-do the coin problem 7.6, now *not* assuming that the radius of the coin b is small compared to the radius of the circle R . That is, in the first pass we found $\tan \phi = \frac{3v^2}{2gR}$. Now find the full relationship including the dependence on b . (Note: this is a transcendental equation which you are not expected to solve.)
9. BTM 8.4.6, pg 222.
10. BTM 8.4.8, pg 223.