PHYS 111 K
(OPTIONAL) HOMEWORK #12

Due : 1 pm on Monday, 7 Dec. 2015

This is an optional homework assignment covering material from Ch. 12. If you choose to submit this for credit, please get it to me no later than 1 pm on the Monday before the final exam. I will post solutions at that time. If you submit this homework for credit, I will use your score to replace the lowest homework score you have this semester. If you choose not to submit this homework, I will base your homework grade on the first 11 assignments of the term. Even if you do not submit these problems for credit, I urge you to work them out carefully since they will be representative of questions on the final drawing on Ch. 12 material.

1. Problem 2, p. 348
2. Problem 6, p. 348
3. Problem 9, p. 348
4. Problem 17, p. 348
5. Problem 20, p. 349
6. Problem 25, p. 349
7. Problem 31, p. 349
8. Problem 34, p. 349
9. Problem 54, p. 350
10. A disk of radius R and mass M rotates about a vertical axis through its center at an initial angular velocity of ω_O. A steady stream of sand falls vertically onto the disk landing at a radius r ($r < R$) from the rotation axis, creating a ring of sand. What will be the angular velocity of the disk/sand system after an amount of sand equal to M/2 has fallen on the disk?