Phys 410

Spring 2013

Homework #1

Due Friday, 1 February, 2013

All problems are from Taylor, Classical Mechanics.

1) Problem 1.10 Circular motion
2) Problem 1.26 Motion in inertial and non-inertial reference frames
3) Problem 1.31 Conservation of linear momentum
4) Problem 1.36 Newton’s 2nd Law of motion
5) Problem 1.46 Motion as seen in a non-inertial reference frame
6) Problem 1.48 Cylindrical polar coordinates
7) Problem 2.3 The Reynolds number
8) Problem 2.4 Origin of the quadratic drag force
9) Problem 2.8 Motion with a different drag force law
10)Problem 2.24 Terminal velocities
11)Problem 2.35 Vertical motion with quadratic drag

Extra Credit

1) Problem 1.50 Periodic motion in an anharmonic potential