

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Department of Physics

Physics 8.01L

Fall 2005

Problem Set 9: Harmonic Motion & Gravity

Due Friday, December 2 at the start of class at 10am.

Please write your name, recitation number, table number, and tutor name on the top right corner of the first page of your homework solutions. Please place your solutions in the Problem Set Solution hand-in bin at the entrance of the classroom.

Reading:

Young & Freedman Chapter 12 & Chapter 13 (Sections 13.1-13.5)

Problem 1 Harmonic Cheerleader

Young & Freedman Problem 13.25 (Page 508)

Problem 2 Timing a Pendulum

Young & Freedman Problem 13.42 (Page 509)

Problem 3 Harmonics & Friction

Young & Freedman Problem 13.63 (Page 510)

Problem 4 Harmonic Christmas Carol

Young & Freedman Problem 13.69 (Page 511)

Problem 5 Harmonic Levitation

Young & Freedman Problem 13.80 (Page 512)

Problem 6 Moon Pull

Young & Freedman Problem 12.7 (Page 468)

Problem 7 Baseball on Deimos

Young & Freedman Problem 12.31 (Page 469)

Problem 8 Three Spheres

Young & Freedman Problem 12.47 (Page 471)

Problem 9 Judging an Approximation

Young & Freedman Problem 12.59 (Page 472)

Problem 10 Physics of Mongo

Young & Freedman Problem 12.60 (Page 472)