

PHYS 101

Homework # 1

DUE DATE:

September 18, 2009

Please do not submit copycat answers from the solutions book. You should at least show your understanding of the problem. Otherwise, this will be considered as cheating.

1) Find, learn, memorize and list the meanings of the following words. List the Turkish equivalent (if you speak Turkish). You can use any dictionary. a) Friction b) Vertical c) Horizontal d) Simultaneous e) Interpret f) identical g) force h) weight i) position j) Speed k) Velocity l) Acceleration m) resistance n) density o) increasing p) decreasing r) continuous s) extend t) beyond u) inertia v) rotation w) gravitation x) circular y) conservation z) mass

2) Fine structure constant is a fundamental physical constant, characterizing the strength of the electromagnetic interaction. Make a search in the internet and briefly explain the physics behind this constant. What is the maximum number of significant digits the measurement yields? Express this number with a) 8 significant digits b) 6 significant digits c) 4 significant digits d) 2 significant digits e) 1 significant digits.

3) Question 1.1 in the text. Chapter 1.

4) Question 1.10 in the text. Chapter 1.

5) Question 1.13 in the text. Chapter 1.

6) Problem 1.67 in the text. Chapter 1.

7) Problem 1.79 in the text. Chapter 1.

8) Problem 1.98 in the text. Chapter 1.