

MAE 103

Assignment 1: Due Thursday, April 11, 2002

A. R. Karagozian

(Please turn in at the end of the class session at 10 am)

1. A body weighs 1000 lbf when exposed to standard earth gravity ($g = 32.174 \text{ ft/sec}^2$).
 - (a) What is its mass in kilograms?
 - (b) What will the weight of this body in Newtons be if it is exposed to the moon's standard acceleration ($g_{\text{moon}} = 1.62 \text{ m/sec}^2$)?
 - (c) How fast will the body accelerate if a net force of 400 lbf is applied to it on the moon or on the earth?
2. Problem 1.10 in Munson, et al.'s text.
3. Problem 1.17 in Munson, et al.'s text.
4. Problem 1.29 in Munson, et al.'s text.
5. Problem 1.53 in Munson, et al.'s text.
6. Problem 1.58 in Munson, et al.'s text.
7. Problem 1.78 in Munson, et al.'s text.
8. Problem 1.83 in Munson, et al.'s text.