

CODE:

Rafelski PHYS161H
Quiz 9 Fall 2007
November 16 2007.

This is a closed book, closed personal notes, 12 min Quiz. Use both front, and back of this page as needed. You must state your personal 4-digit code, I prefer if you do not state your name.

This is closely related to your Test / HW assignment Define all symbols other than what is consistently used in class. BE QUANTITATIVE

(Variant of Problem 12.65, p416) Data: The Moon has a diameter of 3,500 km, and a surface gravity which is $1/6$ that of Earth. Problem: after an accidental retrofire an artificial Moon satellite orbiting at height of some $h = 30 - 150\text{km}$ in nearly circular orbit crashes.

What is the velocity at which the crash will occur? Make sure your answer is fully justified and explained, a simple formula which you remember and evaluate will not suffice.

BONUS:[0.5%] Explain why a crash will occur and if there is a minimum retrofire change in speed required.