

Physics 21 Problem Set 6

Harry Nelson

Due Monday, February 14 in class

Please make your work neat, clear, and easy to follow. It is hard to grade sloppy work accurately. Generally, make a clear diagram, and label quantities. Derive symbolic answers, and then plug in numbers after a symbolic answer is available.

1. Consider the push-me-pull-you on p. 128 of Kleppner, only, now make $m_a \neq m_b$; however, the initial velocities are the same, $v_a(0) = v_0$ and $v_b(0) = 0$.
 - (a) What are the velocities of a and b for later times, $v_a(t)$ and $v_b(t)$?
 - (b) What conditions must be met for $v_a(t) = 0$ to be possible? Interpret.
 2. K&K 3.4
 3. K&K 3.5
 4. K&K 3.7
 5. K&K 3.9
 6. K&K 3.11
 7. K&K 3.16
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