

Physics 20, Fall 2011
Homework Set 7
Due: 5pm Monday, November 21, 2011

Turn homework into the **Phys 20 box on the 2nd floor of Broida Hall**, directly in front of the elevators. (It's labeled with the names of the professor and TA.)

Problem "KK" stands for "Problem in Kleppner & Kolenkow"

Please show your work, and write neatly.

1. KK 3.4. This is one where there is a brief and correct answer, and also a longer (and still correct) answer.
2. KK 3.5. On this one, first think: is the net force on the system (defined by acrobat + monkey) constant over time? Does the net force on the system change when the monkey leaves the perch? Then it is very useful to recall the equation we got by eliminating time from the y -component of the trajectory equation $v_y^2 = v_{y0}^2 - 2gy$.
3. KK 3.8. Assume it takes $1/5$ of a second for the woman to launch herself.
4. KK 3.10
5. KK 3.16

DME 11/13/11