Homework Assignment 7
(Due in class Tues. Nov. 3)

(10) 1. Taylor 8.9

(10) 2. Taylor 8.13

(10) 3. Taylor 8.18

(10) 4. Find the force law for a central force field that allows a particle to move in an spiral orbit given by $r = k \theta^2$.

(10) 5. A particle moves in a circular orbit in a force field given by $F(r) = -\frac{k}{r^2}$. Show that if $k$ suddenly decreases to half its original value, the particle’s orbit becomes parabolic.