

[mex164] Circular and radial motion in inverse-square law potential

A particle of mass m is subject to the central force $F(r) = -mk^2/r^3$, where k is a constant. (a) Find the time T it takes the particle to move once around a circular orbit of radius r_0 . (b) Find the time τ it takes the particle to reach the center of force if released from rest at radius r_0 .

Solution: