

PHYS 111 K

HOMEWORK #11

Due : 2 Dec 2015

1. #12, p. 303
2. Compute the work done in lifting an object of mass m from the surface of the Earth to a height equal to one Earth radius above the surface of the Earth. Answer in terms of M and R , where M is the mass of the Earth and R is the radius of the Earth. (Can you assume that g is constant for this problem?)
3. #18, p. 303
4. # 20, p. 303
5. #51, p. 305
6. #74, p. 307
7. An object can achieve escape velocity if its kinetic energy exceeds the potential gravitational energy of the planet from which it is launched. Look up the values of the Earth's mass and radius, and determine the escape velocity for the Earth.