

1. What gravitational attraction does the moon have for a 70 kg person on earth? (mass of moon= 7.4×10^{22} kg, and distance between earth and moon is 3.8×10^8 m). Don't worry about the radius of each for this problem.

2. How much does an astronaut weigh on Venus if he weighs 800N on earth? (Mass of Venus= 4.88×10^{24} kg, radius of Venus= 6.05×10^6 m)

3. What is the force of gravity on a 1000 kg satellite which is 1000 km above the earth's surface. (Radius of Earth= 6.37×10^6 m, mass of earth = 5.98×10^{24} kg)

4. Find the acceleration of gravity on the moon of Jupiter named Io. The radius of Io is 1.7×10^6 m and the mass of Io is 7.87×10^{22} kg.

5. If the radius of a planet is 7500km and an object weighs 950n on the surface, what is its weight when it is located at....(Assume g is 18 m/s/s.)

_____ 19km above the surface

_____ 401 km above the surface