1. The mass of Jupiter is 1.9×10^{27}kg and then that of sun is 1.99×10^{30}kg. The mean distance of the Jupiter from sun is 7.8×10^{11}m then calculate the gravitational force that sun experience on Jupiter and. Assuming that Jupiter moves in circular orbit around the sun, calculate the speed of the Jupiter. G = $6.67\times10^{-11}Nm^2kg^{-1}$.
2. The identical bodies each of mass m are located at vertices of an equilateral triangle with side r. At what speed must they move if they all revolves under the influence of one another's gravitation in a circular orbits circumscribing the triangle while still preserving the equilateral triangle.
3. A body weights 900g wt. on the surface of earth. How much will it weight on the surface of Mars whose mass is one-ninth and radius one-half that of earth.
4. A rocket is fired from earth towards moon. At what distance from the moon is the gravitational force on the rocket is zero. Mass of earth 6×10^{24}kg; mass of moon is 7.4×10^{22}kg and orbital radius of moon is 3.8×10^{8} m. Neglect the effect of the Sun and other Planets
5. Estimate the mass of the sun, assuming the orbit of earth around sun to be a circle and the of diameter 1.49×10^{11}m, and G= 6.66×10^{-11} Nm^2kg^{-2}.
6. Three mass m, 2m, 4m are placed on three vertexes of a rt. Angled triangle ABC, where AB = BC = L. Find the magnitude of the resultant gravitational pull on body at A due to bodies at B and C.
7. The identical bodies each of mass m are located at vertices of a rectangle. Find the net gravitational force on the point where two diagonals of the rectangle intersect each other. Here side of rectangle are in the ratio of 1:2.
8. The identical bodies each of mass m are located at vertices of a square having each side 'a'. Find the net gravitational force on the point where two diagonals of the square intersect each other.
9. The identical bodies each of mass m are located at vertices of a cube having each side '2a'. Find the net gravitational force on the point where all diagonals of the cube intersect each other.
10. Evaluate the value of g for earth if Mass of earth 6×10^{24}kg and radius of earth 6400 km. G = $6.67\times10^{-11}Nm^2kg^{-1}$.