: For electron, $m_e = 9.1 \times 10^{-31}$ kg,

$q_e = 1.6 \times 10^{-19}$C

For proton, $m_p = 1.67 \times 10^{-27}$ kg,

$q_p = 1.6 \times 10^{-19}$C

Coulombian force between an electron and a proton,

$$F_C = \frac{1}{4\pi\varepsilon_o} \times \frac{q_e q_p}{r^2} = \frac{9\times10^9 \times (1.6\times10^{-19})^2}{r^2}$$

$$= \frac{2.304\times10^{-28}}{r^2} \text{ N}$$

Gravitational force between an electron and a proton,

$$F_G = \frac{G m_e m_p}{r^2}$$

$$= \frac{6.67\times10^{-11} \times (9.1\times10^{-31}) \times 1.67\times10^{-27}}{r^2} \text{ N}$$

$$= \frac{1.01\times10^{-67}}{r^2} \text{ N}$$

$$\therefore \frac{F_C}{F_G} = \frac{2.304\times10^{-28}}{1.01\times10^{-67}} = 2.28\times10^{39}$$