

$$\Delta x = \int v dt \quad v = \frac{dx}{dt} \quad a = \frac{dv}{dt} \quad g = 9.81 \text{ m/s}^2 \quad F_{net} = ma = \frac{dp}{dt} \quad F_{buoy.} \propto V_{disp.} \rho_{fluid} \quad F_{fr.} \propto F_N$$

$$pressure = F/A \quad p = mv \quad Impulse = \int F_{net} dt = \Delta p \quad F_g = GMm/r^2 \quad G = 6.67 \times 10^{-11}$$

$$M_{Earth} = 6 \times 10^{24} \text{ kg} \quad R_{Earth} = 6.4 \times 10^6 \text{ m} \quad T^2/R^3 = \text{constant} \quad F_c = mv^2/r \quad v = 2\pi r/T \quad v_{orb} = \sqrt{GM/r}$$

$$F_E = kQq/r^2 \quad k = 9 \times 10^9 \quad q_{electron} = -1.6 \times 10^{-19} \text{ C} \quad q_{proton} = +1.6 \times 10^{-19} \text{ C} \quad E = F_E/q \quad V = IR$$

$$R \propto L/A \quad F_B \propto 1/r^2 \quad B \propto I/r$$

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