

Electric Field (H.1)

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Coulomb's Law

$$F = \frac{Q_1 Q_2}{4\pi\epsilon_0 R^2}$$

$$F_t = \frac{Q_1 Q_t}{4\pi\epsilon_0 R_{it}^2} a_{it}$$

$$\frac{F_t}{Q_t} = \frac{Q_1}{4\pi\epsilon_0 R_{it}^2} a_{it}$$

$$E = \frac{F_t}{Q_t}$$

$$E = \frac{Q}{4\pi\epsilon_0 R^2} a_R$$

$$\rho_v = \lim_{\Delta v \rightarrow 0} \frac{\Delta Q}{\Delta v}$$

$$Q = \int_{vol} \rho_v dv$$

$$E_p = \frac{\rho_L}{2\pi\epsilon_0 \rho}$$

$$E = \frac{\rho_L}{2\pi\epsilon_0 \rho} a_\rho$$

$$E = \frac{\rho_s}{2\epsilon_0} a_N$$

$$E = E_+ + E_- = \frac{\rho_s}{\epsilon_0} a$$

$$\frac{E_y}{E_x} = \frac{dy}{dx}$$