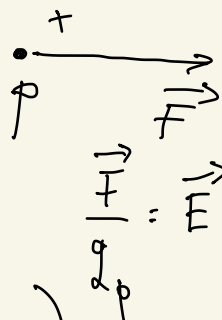
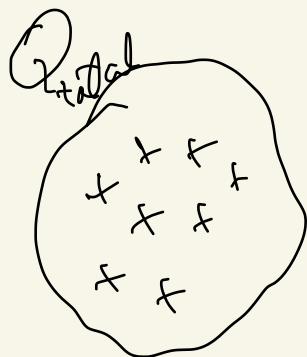
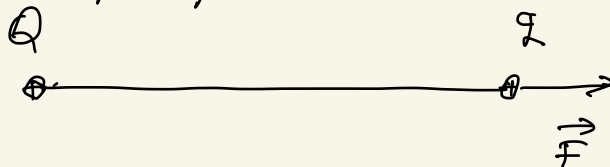


intensitatea
câmpului electrostatic



$$\left\{ \begin{array}{l} \vec{F} = \frac{k q Q}{r^3} \vec{r} \text{ (numai pentru } \text{câmpuri punctiforme)} \\ \vec{E} = \frac{\vec{F}}{q} \end{array} \right.$$

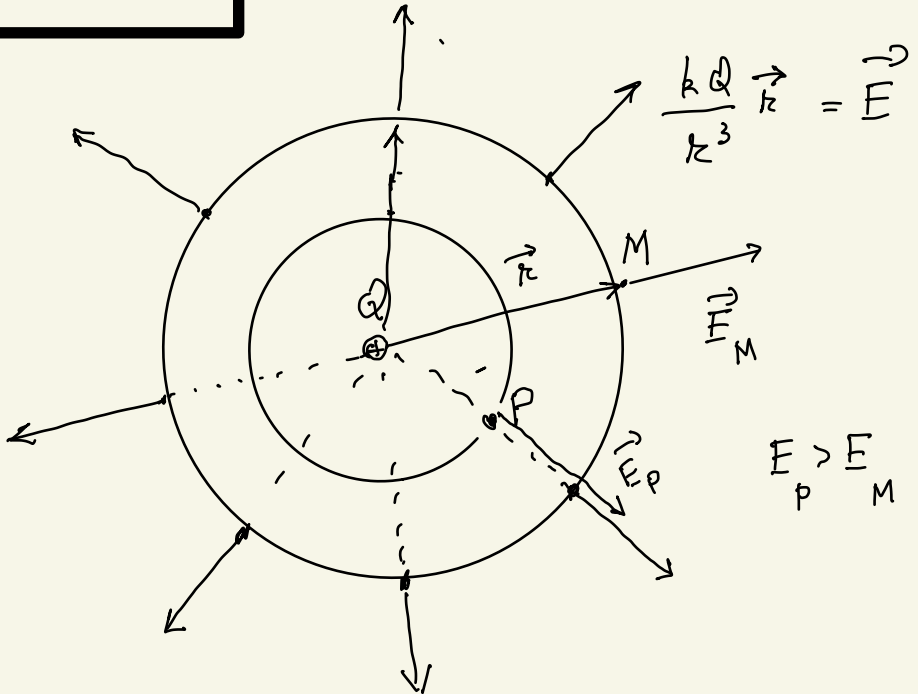


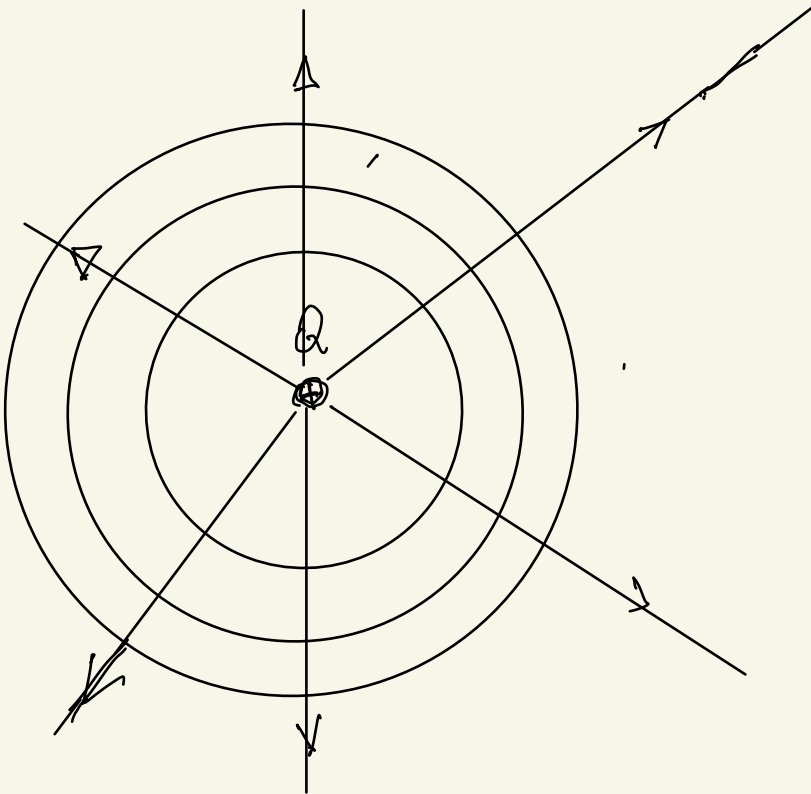
$$\frac{\vec{F}}{q} = \frac{1}{q} \cdot k \frac{Qq}{r^3} \vec{r} = \frac{kQ}{r^3} \vec{r} = \vec{E}$$

$$\frac{kQ}{r^3} \vec{r} = \vec{E}$$

expresia vectorială a intensității câmpului
electrostatic produs de sarcină
punctiformă Q la distanță r de ea.

$$|\vec{E}| = E = \frac{k|Q|}{r^2}$$

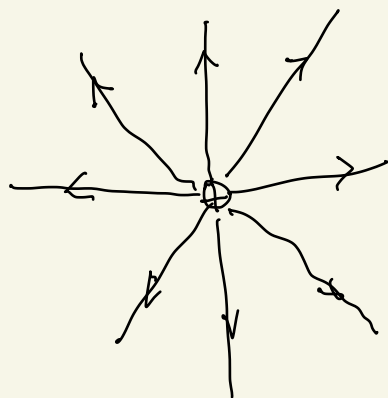




$$\frac{\vec{F}}{q} = \vec{E}$$

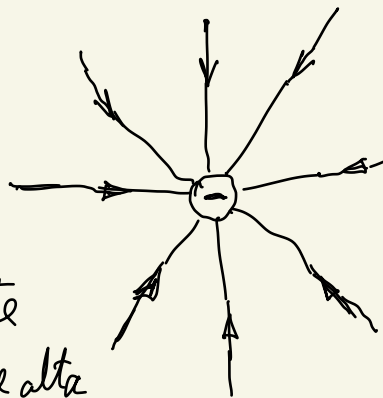
$$\vec{F} = q \vec{E}$$

$$(\vec{G} = m \cdot \vec{g})$$

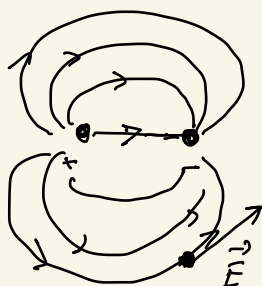
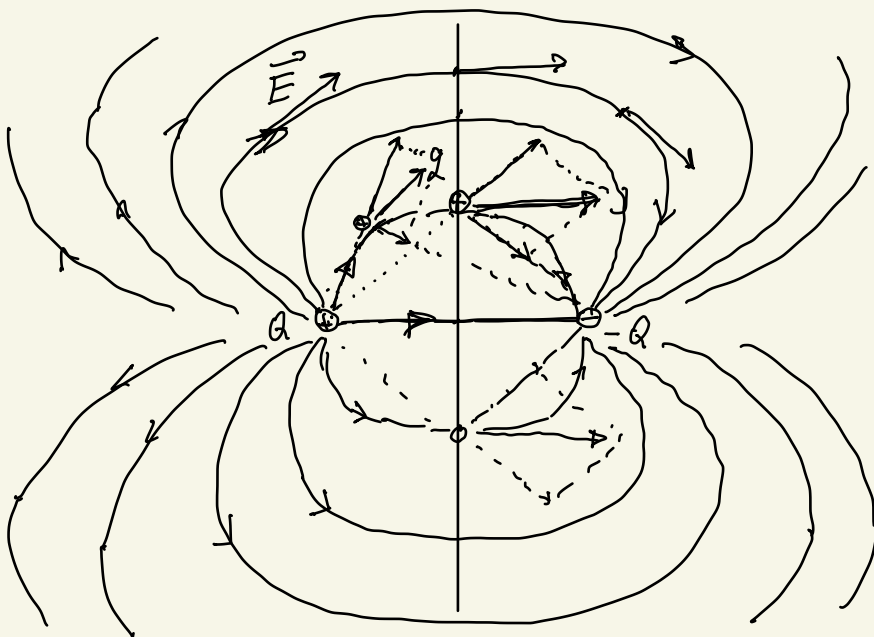


$Q > 0$

de parte
una de alta



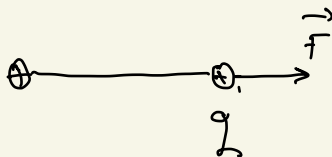
$Q < 0$



$$\vec{F} = g \vec{E} \quad \vec{E} = \frac{\vec{F}}{g}$$

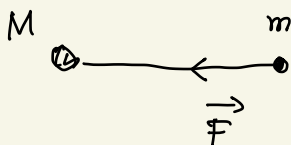
$$\vec{F} = g \vec{E}$$

$$\langle E \rangle_{SI} = \frac{N}{C}$$



$$\vec{F}_{el} = k \frac{Qq}{r^2} \vec{r} \quad (\text{Coulomb})$$

$$F_{el} = \frac{k|Qq|}{r^2}$$



$$\vec{F}_{grav.} = -G \frac{Mm}{r^2} \vec{r} \quad (\text{Newton})$$

$$6,66 \cdot 10^{-11} \frac{Nm^2}{kg^2}$$

$$F_{grav} = G \frac{Mm}{r^2}$$

$$F_{grav} = \left(\frac{GM}{r^2} \right) m = \Gamma m$$

La superficie Poincaré $r = R \approx 6370 km$

$$M = 6 \cdot 10^{24} kg$$

$$\Gamma_0 = 9,8 \frac{N}{kg} \left(\frac{m}{s^2} \right)$$

$$\vec{F} = \vec{F}_{1m} + \vec{F}_{2m} + \dots + \vec{F}_{Nm}$$

$$\sum f_i \Delta x_i \rightarrow \int f(x) dx$$

Leibniz - Newton

$$\int_a^b f(x) dx = F(b) - F(a)$$

