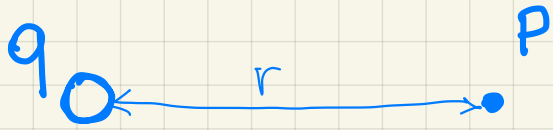




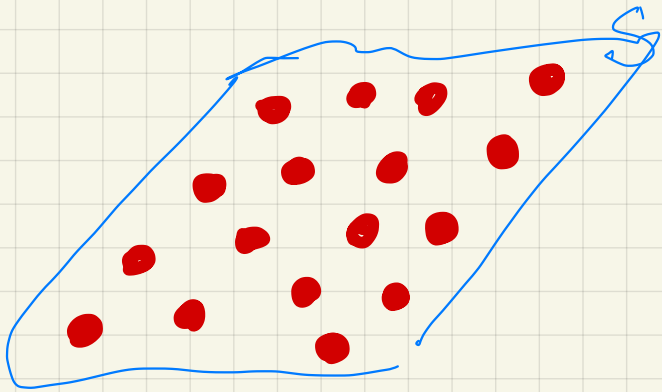
CAMPO ELETTRICO DI VARIE DISTRIBUZIONI

LA CARICA PUNTIFORME

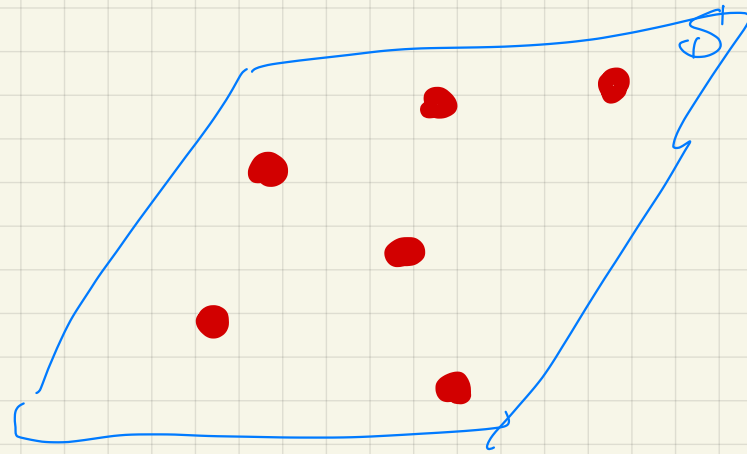


$$\vec{E} = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2}$$

DENSITÀ DI CARICA SUPERFICIALE



q

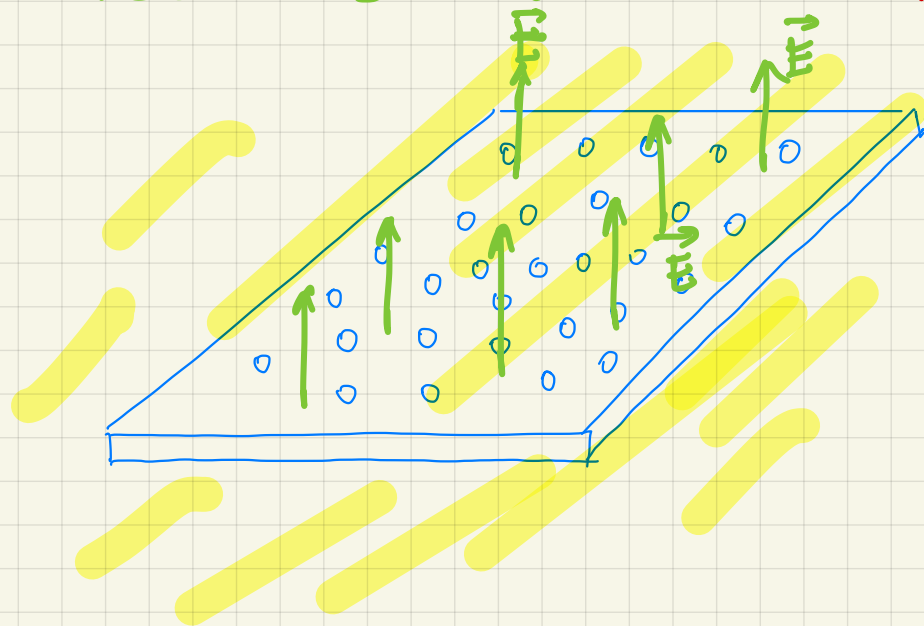


q

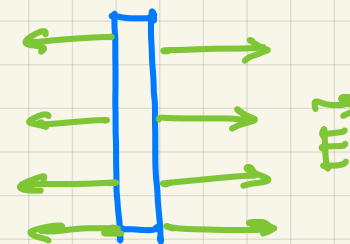
$$q = \frac{Q}{S} \rightarrow \frac{C}{m^2}$$

DISTRIBUZIONE SU UN PIANO INFINITO

SI DIMOSTRA CHE



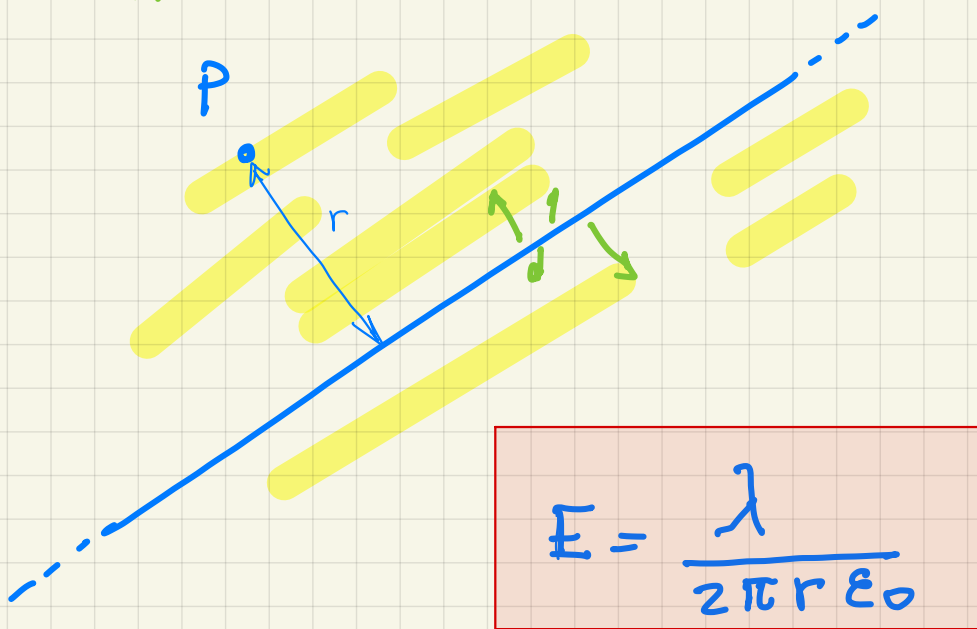
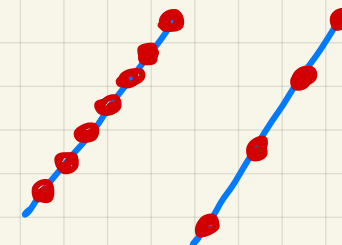
$$E = \frac{\rho}{2\epsilon_0}$$



DISTRIBUZIONE SU UN FILO RETTILINEO INFINITO

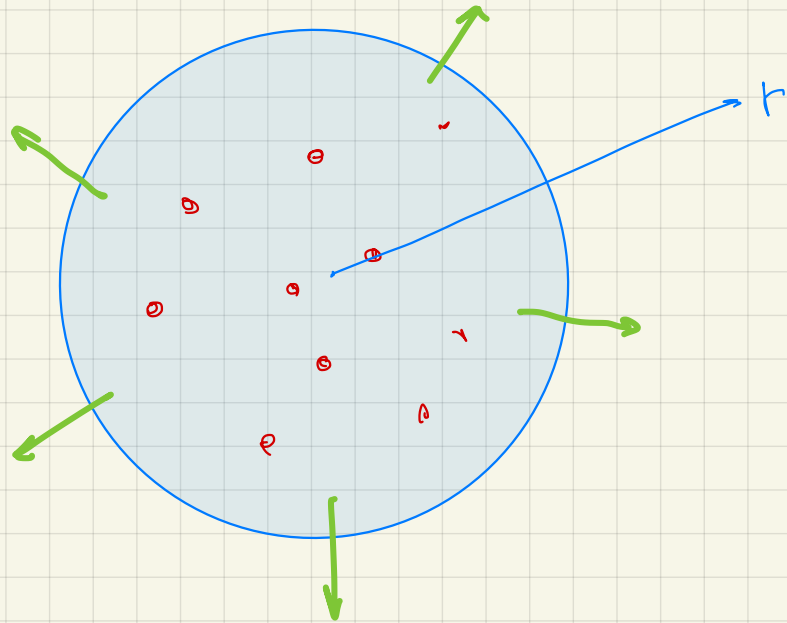
DENSITA' LINEARE
DI CARICA

$$\lambda = \frac{Q}{l} \rightarrow \frac{C}{m}$$



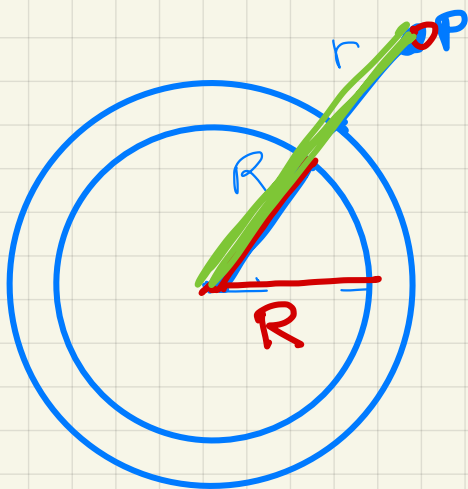
$$E = \frac{\lambda}{2\pi r \epsilon_0}$$

DISTRIBUZIONE DI CARICA SU UNA SFERA



$$E = \frac{1}{4\pi\epsilon_0} \frac{Q}{r^2}$$

DISTRIBUZIONE DI CARICA INTERNO E ESTERNO ALLA SFERA

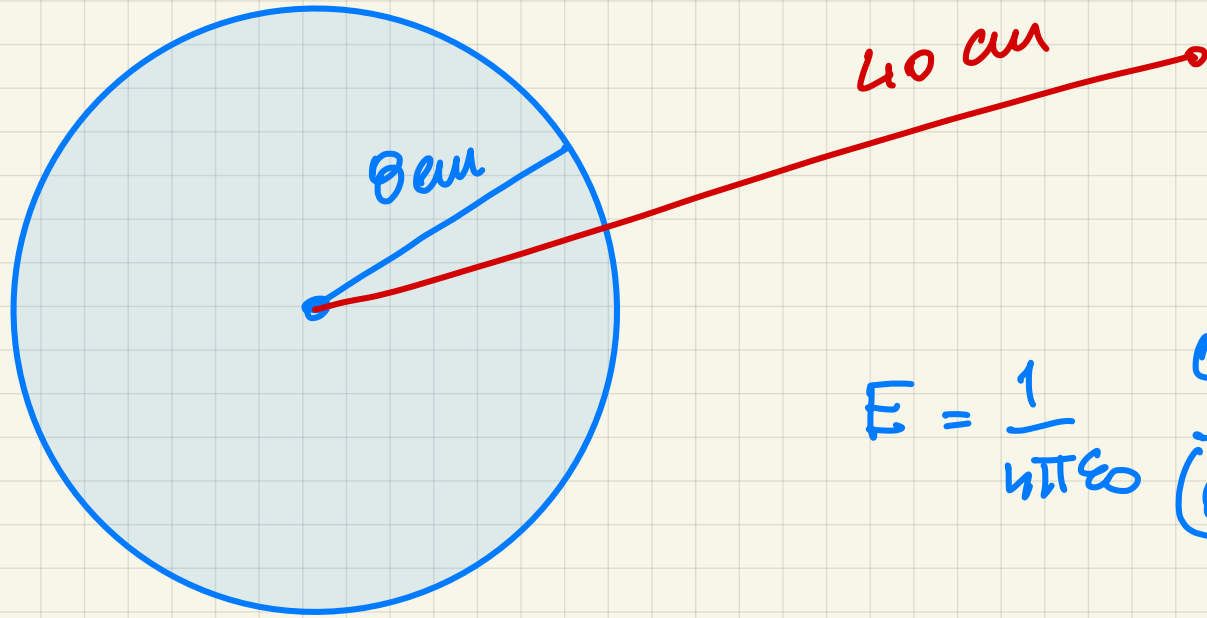


$$r \geq R$$

Esterno $E = \frac{1}{4\pi\epsilon_0} \frac{Q}{r^2}$

Interno $E = \frac{1}{4\pi\epsilon_0} \frac{Q}{R^3} \cdot r$

R raggio della sfera $r = \text{dist. dal centro}$



$$E = \frac{1}{4\pi\epsilon_0} \frac{Q}{(0.08)^3} \cdot (0.4)^3$$