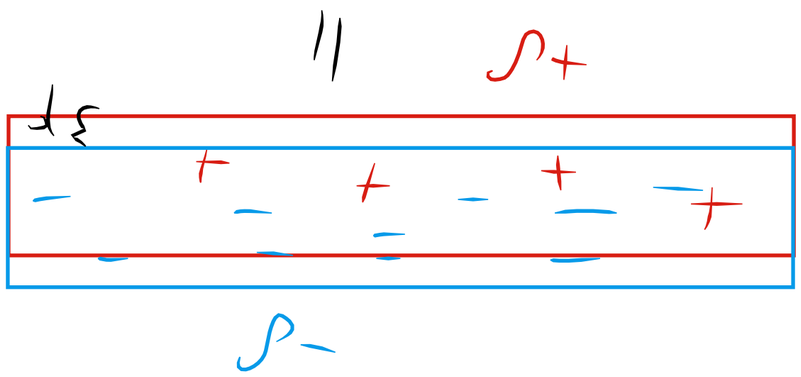
a)

$$\bar{\rho} = \rho \bar{d}$$

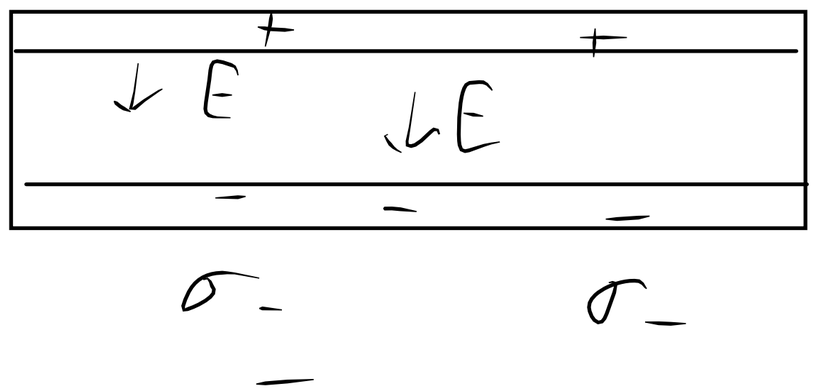


$$\sigma_+ = \frac{\Psi}{S} =$$

$$= \frac{\rho S d}{S} =$$

$$= \rho_+ d = \rho$$

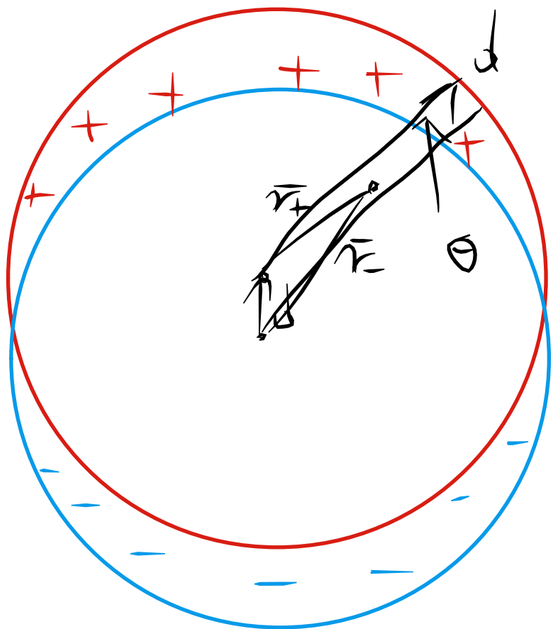
$$|\bar{\rho}| = \sigma_+$$



$$\sigma \bar{n} = \bar{\rho}$$

$$\bar{E} = \frac{\sigma}{\varepsilon_0} = \frac{-\bar{\rho}}{\varepsilon_0}$$

б)



$$\bar{E} = \frac{\rho \bar{r}_+}{3\varepsilon_0} - \frac{\rho \bar{r}_-}{3\varepsilon_0} = \frac{\rho}{3\varepsilon_0}\left(\bar{r}_+ - \bar{r}_-\right) = \frac{-\rho \bar{d}}{3\varepsilon_0} = \frac{-\bar{\rho}}{3\varepsilon_0}$$

$$\sigma = \rho d \cos\theta = \rho \cos\theta$$