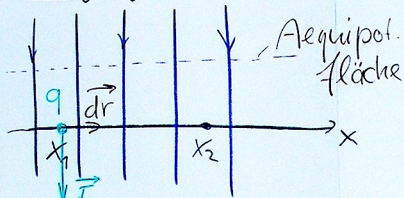


Bewegung $\perp \vec{E}$ -Feld



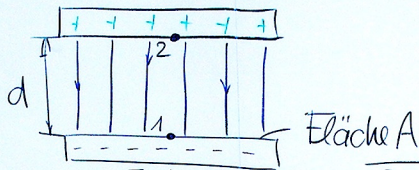
$$W_{1 \rightarrow 2} = \int_{x_1}^{x_2} \vec{F} \cdot \vec{dr} = 0$$

$$= U_{21} = 0$$

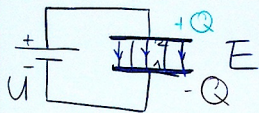
$$= \varphi(x_2) = \varphi(x_1)$$

liegen auf
Aequipot. fläche

Bsp.: Plattenkondensator



$$U_{21} = \frac{-qEd}{q} = -Ed = -\frac{Qd}{\epsilon_0 A}$$



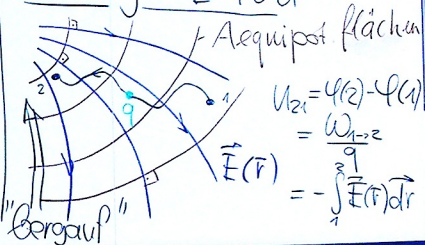
$$U_{21} = U \Rightarrow E = \frac{U}{d} \text{ [V/m]}$$

Def: Kapazität

$$C = \frac{Q}{U}$$

Plattenkond. $C = \frac{\epsilon_0 A}{d}$

Beliebiges \vec{E} -Feld



$$U_{21} = \varphi(2) - \varphi(1)$$

$$= \frac{W_{1 \rightarrow 2}}{q}$$

$$= - \int_1^2 \vec{E}(\vec{r}) \cdot \vec{dr}$$