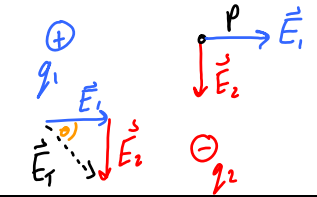
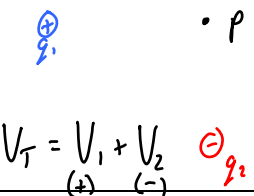


Table of Electric Quantities

Quantity	Formulae	Units	Vector or Scalar?	Absolute Value or Use Negative Signs?
F_E force	$F_E = \frac{kq_1q_2}{r^2}$ (point charges) $F_E = \vec{E}q$ (always)	N	Vector (vector addition)	Abs Value
\vec{E} field	$\vec{E} = \frac{kq}{r^2}$ (points) $\vec{E} = \frac{\Delta V}{d}$ (plates) $\vec{E} = \frac{F_E}{q}$ (always)	N/C or (V/m)	also vector! 	Abs. Value
E_p potential energy	$E_p = \frac{kq_1q_2}{r}$ (point) $\Delta E_p = \Delta Vq$ (always)	J	Scalar (no vector addition)	Use +/- signs (q and ΔV)
V potential	$V = \frac{kq}{r}$ (point) $\Delta V = \frac{\Delta E_p}{q}$ (always)	V or (J/C)		use +/- signs