

$$(1) \quad 2SE_1 = \frac{Q}{\epsilon_0} \quad E_1 = \frac{Q}{2S\epsilon_0}$$

$$(2) \quad E_2 = \frac{Q'}{2S\epsilon_0} \quad E_1 + E_2 = 0 \quad Q' = -Q$$

$$(3) \quad E = |E_1| + |E_2| = \frac{Q}{S\epsilon_0}$$

$$(4) \quad V_{AB} = - \int_0^d \frac{Q}{S\epsilon_0} dx = - \frac{Qd}{S\epsilon_0}$$

$$|V_{AB}| = \frac{Qd}{S\epsilon_0}$$

$$(5) \quad E = 0$$

