

⑨ $q = 3 \cdot 10^{-5} \text{ C}$

① $V_B = k \frac{2 \cdot 10^{-5}}{3} = \frac{9 \cdot 10^9 \cdot 2 \cdot 10^{-5}}{3} = 6 \cdot 10^4 \text{ V}$

$V_A = k \frac{2 \cdot 10^{-5}}{6} = \frac{9 \cdot 10^9 \cdot 2 \cdot 10^{-5}}{6} = 3 \cdot 10^4 \text{ V}$

$W_{A \rightarrow B} = q \cdot (V_B - V_A) = 3 \cdot 10^{-5} (6 \cdot 10^4 - 3 \cdot 10^4 \text{ V}) = 9 \cdot 10^{-4} \text{ J}$

⑥

$$V_c = k \cdot \frac{2 \cdot 10^{-5}}{6} = V_A = 3 \cdot 10^4 \text{ V.}$$

$$W_{g \rightarrow c} = q (V_c - V_b) = 3 \cdot 10^{-5} (3 \cdot 10^4 - 6 \cdot 10^4) = -5,4 \cdot 10^4 \text{ J.}$$

⑦

$$V_A = V_C \Rightarrow \boxed{W_{C \rightarrow A} = 0 \text{ J}}$$



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