

Answer on Question #51495-Physics-Electromagnetism

Points A and B each have an electric potential of +12 V. How much work would be required to take $Q = 3 \text{ C}$ of positive charge from A to B?

Solution

Work required taking the charge Q from A to B is

$$W = Q(V_B - V_A).$$

But we know that

$$V_B = V_A = +12 \text{ V}.$$

Thus

$$W = Q(V_B - V_A) = Q \cdot 0 = 0.$$

Answer: Zero.

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