What is the potential difference going from point A to point B? How much work is needed to move a proton from point A to point B?

-15 μC

A

B

0.60 m

1.50 m
\[ V_{AB} = V_B - V_A \]
\[ = \frac{Kq_B}{r_B} - \frac{Kq_A}{r_A} \]
\[ = -225000 - (-90000) \]
\[ = -135000 \text{ V} \]

\[ \Delta E_p = \Delta U = (-135000)(1.6 \times 10^{-19}) \]
\[ = -2.16 \times 10^{-14} \text{ J} \]