

76. We denote  $q = 25 \times 10^{-9}$  C,  $y = 0.6$  m,  $x = 0.8$  m, with  $V =$  the net potential (assuming  $V \rightarrow 0$  as  $r \rightarrow \infty$ ). Then,

$$\begin{aligned}V_A &= \frac{1}{4\pi\epsilon_0} \frac{q}{y} + \frac{1}{4\pi\epsilon_0} \frac{(-q)}{x} \\V_B &= \frac{1}{4\pi\epsilon_0} \frac{q}{x} + \frac{1}{4\pi\epsilon_0} \frac{(-q)}{y}\end{aligned}$$

leads to

$$V_B - V_A = \frac{2}{4\pi\epsilon_0} \frac{q}{x} - \frac{2}{4\pi\epsilon_0} \frac{q}{y} = \frac{q}{2\pi\epsilon_0} \left( \frac{1}{x} - \frac{1}{y} \right)$$

which yields  $\Delta V = -187 \approx -190$  V.