

73. The net potential (at point  $A$  or  $B$ ) is computed using Eq. 25-27. Thus, using  $k$  for  $1/4\pi\epsilon_0$ , the difference is

$$\begin{aligned}V_B - V_A &= \left( \frac{kq}{2d} + \frac{k(-5q)}{2d} \right) - \left( \frac{kq}{d} + \frac{k(-5q)}{5d} \right) \\&= -\frac{4kq}{2d}\end{aligned}$$

which simplifies to  $-q/2\pi\epsilon_0$  in SI units (with  $d = 1$  m).