**Ex**: A system of 3 point charges is placed on the corners of a square 10 cm on a side. Find the electric potential $V$ at $X$.

![Diagram](image)

This problem involves summing up the contributions to $V$ at the point $X$ for each of the charges involved.

\[
V_x = k \frac{q_5}{r_5} + k \frac{q_8}{r_8} + k \frac{q_3}{r_3}
\]

\[
= k \frac{5 \times 10^{-9} \text{ C}}{0.1 \text{ m}} + k \frac{8 \times 10^{-9} \text{ C}}{0.14 \text{ m}} + k \frac{-3 \times 10^{-9} \text{ C}}{0.1 \text{ m}}
\]

\[
= k(77 \times 10^{-9} \text{ C/m}) = 692 \text{ N} \cdot \text{m/C} = 692 \text{ V}
\]