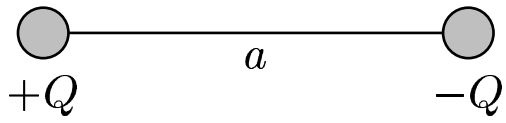
Two point charges are located a distance of a apart and lie on the x-axis.



Determine the electric field vector $\vec{E}$ due to $-Q$ at $+Q$.

A) $\|\vec{E}\| = -k\,\dfrac{Q}{a^2}$ direction : $\leftarrow$

B) $\|\vec{E}\| = +k\,\dfrac{Q}{a^2}$ direction : $\leftarrow$

C) $\|\vec{E}\| = -k\,\dfrac{Q}{a^2}$ direction : $\rightarrow$

D) $\|\vec{E}\| = +k\,\dfrac{Q}{a^2}$ direction : $\rightarrow$

The magnitude of a vector $\|\vec{E}\|$ is always positive. Since the charges are

of opposite sign $\|\vec{E}\| = +k\,\dfrac{Q}{a^2}$ direction : $\leftarrow$

Answer **B**.

23.04-04˙Electric˙Field˙2˙Charges 2004-3-24