Two charges are placed on the $x$-axis as shown. On the left is a positive charge of magnitude $2Q$ and on the right is a negative charge $-Q$. The charges are separated by a distance $a$. The symbol $a$ here is a positive constant.

Calculate the electric field at the point shown. The point lies on the $x$-axis, a distance $a$ to the right of the negative charge.

\[ E(x) = \frac{Q}{4\pi \varepsilon_0 a^2} \] to the right.

\[ E(x) = \frac{3Q}{4\pi \varepsilon_0 a^2} \] to the right.

\[ E(x) = \frac{3Q}{4\pi \varepsilon_0 a^2} \] to the left.

\[ E(x) = \frac{3Q}{8\pi \varepsilon_0 a^2} \] to the right.

\[ E(x) = \frac{Q}{8\pi \varepsilon_0 a^2} \] to the left.

\[ E(x) = \frac{3Q^2}{8\pi \varepsilon_0 a^2} \] to the left.

\[ E(x) = \frac{3Q^2}{4\pi \varepsilon_0 a^2} \] to the left.

\[ E(x) = \frac{Q^2}{8\pi \varepsilon_0 a^2} \] to the right.

(j) None of the above

Answer: ____________________________