\[
\frac{\tau}{a} = \frac{Q_1}{\mu \epsilon_0} \frac{a}{x^3} - mg \Rightarrow qE + qE
\]

\[
F_x = \frac{Q_1}{\mu \epsilon_0} \frac{a}{(a^2 + x^2)^{3/2}} + qE
\]

\[
F_y = \frac{Q_1}{\mu \epsilon_0} \frac{b}{(a^2 + x^2)^{3/2}} - mg
\]

\[F = 0 \Rightarrow \]

\[
\frac{Q_1}{\mu \epsilon_0} \frac{b}{(a^2 + x^2)^{3/2}} = mg
\]

\[
E = -\frac{Q_1 a}{\mu \epsilon_0 (a^2 + x^2)^{3/2}} = -\frac{mg a}{b q}
\]

Your class also full credit, if you use the solution in this way. \( q \) is not sufficient, since a solution is only complete, if the answer is given in terms of known quantities, and \( q \) containing the only known charge. \( q_1 \).

However, if you did not solve for \( q \), explicitly and get exact completely right, your deserve full credit!