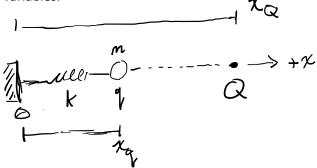
## Electric Charges and Coulomb's Law

1. Charge Q is fixed in space at the position  $x_Q$ , and charge q is attached to a spring with a spring constant k, and an equilibrium length  $x_0$ . Solve for the net force on charge q in terms of the given variables.



2. Four charges are positioned according to the diagram below. What is the initial acceleration of mass m?

 $\frac{(-a,0)}{1a} \xrightarrow{(a,0)} x$   $\frac{(a,0)}{a} \xrightarrow{(a,0)} x$