$$F = \frac{q_1 q_2}{4\pi\varepsilon_0 r^2} \Rightarrow F = q_1 \times q_2 \times \frac{1}{4\pi\varepsilon_0} \times \frac{1}{r^2}$$

$9\times10^{-1} = F$

$q_2 = q_1 - 6\times10^{-6}$ (Since $\underset{\substack{\downarrow \\ \text{Given data}}}{q_1 - q_2} = 6\times10^{-6}$)

$$\frac{1}{4\pi\varepsilon_0} = 9\times10^{9}$$

$r = 40 \times 10^{-2}\,m$

So $$9\times10^{-1} = \frac{q_1 \times (q_1 - 6\times10^{-6}) \times 9\times10^{9}}{(40\times10^{-2})^2}$$

$$9\times10^{-1} = \frac{q_1^2 - 6\times10^{-6} q_1 \times 9\times10^{9}}{16\times10^{-2}}$$

$(40\times10^{-2})^2$
$= 1600\times10^{-4}$
$= 16\times10^{2}\times10^{-4}$
$= 16\times10^{-2}$

$$\frac{9\times10^{-1}}{9\times10^{9}} = \frac{q_1^2 - 6\times10^{-6} q_1}{16\times10^{-2}}$$

$$10^{-10} \times 16\times10^{-2} = q_1^2 - 6\times10^{-6} q_1$$

$$q_1^2 - 6\times10^{-6} q_1 - 16\times10^{-12} = 0$$

$$F = \frac{1}{4\pi\varepsilon_0} \times q_1 \times q_2 \times \frac{1}{r^2}$$

$F = 9\times10^{-1}$ N

$q_1 - q_2 = 6\times10^{-6}$ so $q_2 = q_1 - 6\times10^{-6}$

$r = 40\times10^{-2}$ m ; $r^2 = 1600\times10^{-4}$

$r^2 = 16\times10^{+2}\times10^{-4} = 16\times10^{-2}$

substituting

$$9\times10^{-1} = \frac{9\times10^{9}\times q_1\times(q_1 - 6\times10^{-6})}{16\times10^{-2}}$$

$$10^{-1}\times16\times10^{-2} = (q_1^2 - 6\times10^{-6}q_1)\times10^{9}$$

$$16\times10^{-3} = q_1^2 - 6\times10^{-6}q_1\times10^{9}$$

so $q_1^2 - 6\times10^{-6}q_1 - 16\times10^{-3}\times10^{9}$

so $\boxed{q_1^2 - 6\times10^{-6}q_1 - 16\times10^{6} = 0}$