132	(a)	$F = Eq$	
		$F = 5 \text{ x } 10^6 \text{ x } (3.37 \text{ x } 10^4 \text{ x } 1.6 \text{ x } 10^{-19})$	1+1
		$F = 269.6 \text{ N}$	1
	(b)	$q = \frac{F}{E}$	
		$q = \frac{6.56 \text{ x } 10^{-11}}{5 \text{ x } 10^6}$	1
		$q = 1.3 \text{ x } 10^{-17} \text{ C}$	1
		$N = \frac{1.3 \text{ x } 10^{-17}}{1.6 \text{ x } 10^{-19}}$	
		$N = 82$	1
133	(a)	$Eq = \frac{1}{4\pi\varepsilon_0}\frac{qq}{r^2}$	
		$E\cancel{q} = \frac{1}{4\pi\varepsilon_0}\frac{\cancel{q}q}{r^2}$	1
		$E = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2}$	1
	(b)	$E = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2}$	
		$E = 9.00 \text{ x } 10^9 \text{ x} \frac{30 \text{ x } 10^{-6}}{(0.03)^2}$	1
		$E = 3 \text{ x } 10^8 \text{ N C}^{-1}$	1
	(c)	$F = Eq$	
		$F = 3 \text{ x } 10^8 \text{ x } 12 \text{ x } 10^{-12}$	1
		$F = 3.6 \text{ x } 10^{-3}$ N, away from the 30 μC charge	1+1
134	(a)	$E_1 = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2}$	
		$E_1 = 9.00 \text{ x } 10^9 \text{ x} \frac{8 \text{ x } 10^{-6}}{(0.3)^2}$	1
		$E_1 = 8 \text{ x } 10^5 \text{ N C}^{-1}$, right of Q	1
	(b)	$E_2 = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2}$	
		$E_2 = 9.00 \text{ x } 10^9 \text{ x} \frac{6 \text{ x } 10^{-6}}{(0.6)^2}$	
		$E_2 = 1.5 \text{ x } 10^5 \text{ N C}^{-1}$, right of Q	1
		$E_{net} = E_1 + E_2$	
		$E_{net} = 8 \text{ x } 10^5 + 1.5 \text{ x } 10^5$	
		$E_{net} = 9.5 \text{ x } 10^5 \text{ N C}^{-1}$, right of Q	1