C.11.9 Conductivity
Suppose you prepare a dilute solution of sodium chloride (NaCl). It dissociates almost completely into ions (Na$^+$ and Cl$^-$). You measure its electrical conductivity to be 0.01 $\Omega^{-1}$m$^{-1}$. Your lab partner prepares a dilute solution of magnesium chloride (MgCl$_2$) with the same concentration of Mg$^{2+}$ ions as your solution's concentration of sodium ions. What is the conductivity of your partner's solution?