

## Exercise 4

A  $\text{Na}^+$ -selective channel population has a constant conductance at membrane potential levels more negative than  $-50$  mV. When the membrane is depolarized from  $-50$  mV to  $-20$  mV, there is a gradual 5-fold increase in conductance, and at potentials above  $-20$  mV the conductance remains constant. The equilibrium potential of  $\text{Na}^+$  is  $+60$  mV. The current direction towards the negative is by convention.

