$\qquad$
a) The charge stored on one plate of a capacitor is see-sawing up and down as indicted in the figure at right. Make a graph of the corresponding capacitor current as a function of time.

b) The current flowing past a point in a circuit is show at right. Find the net amount of charge that has moved past in the between $t=0$ and each of the times given below. (Net means that charge flowing in the opposite direction subtracts from the total.)

$Q$ between $t=0$ and $t=0.4 \mathrm{~s}=$ $\qquad$
$Q$ between $t=0$ and $t=1 \mathrm{~s}$ $\qquad$
$Q$ between $t=0$ and $t=1.6 \mathrm{~s}=$ $\qquad$
$Q$ between $t=0$ and $t=2 \mathrm{~s}=$ $\qquad$

