Problem 3.

(a) $I_y(V_t)$ is activated by depolarization.

$I_y(V_t)$ is an outward current.

$I_y(V_t)$ is activated by depolarization because from the plot, $I_\infty = G_y\, y_\infty\, (V-E)$. $I_\infty < 0$, $G_y > 0$, $y_\infty > 0$

Therefore $V-E < 0$.

(b) Using the equa-on I_infinity = G_infinity * y_infinity * (V-E), where G_infinity is the conductance and the y_infinity is the occupancy probability; Using graph (a), we could roughly approxiatmate tou at -20. This way, we could find the final value