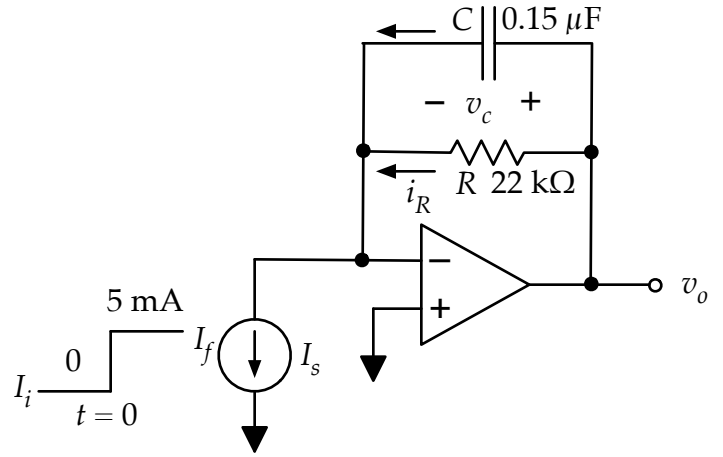


In the op-amp circuit shown, the current source changes abruptly from 0 to 5 mA at $t = 0$. Find the expression for $v_o(t)$. Find the time at which $v_o = 5$ V.

Hints: Note how the capacitor voltage relates to the op-amp output voltage. Write a node equation relating I_f , i_C and i_R and see if you can manipulate it into something familiar. (See slide 4 of the RC transient notes.)



$v_o(t) =$ _____

$t(v_o = 5 \text{ V}) =$ _____