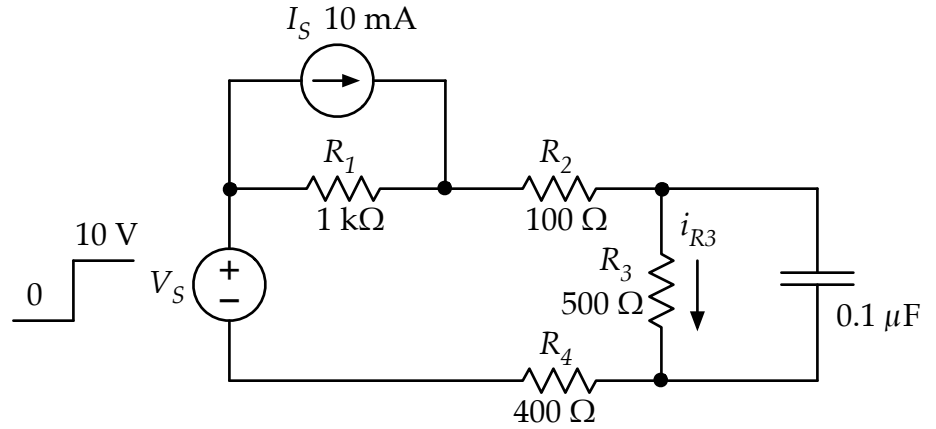


For the circuit shown, the voltage source jumps abruptly from 0 to 10 V at  $t = 0$ . Find the expression of  $i_{R3}(t)$  for  $t > 0$ . Find the time at which the current has gone half-way from its initial value to its final value.



Hints: When  $V_S = 0$ , it behaves like a short-circuit. Also, note how  $i_{R3}$  relates to  $v_C$ .

$i_{R3}(t) =$  \_\_\_\_\_

$t$  (half-way) = \_\_\_\_\_