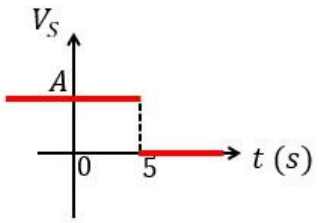
Q1

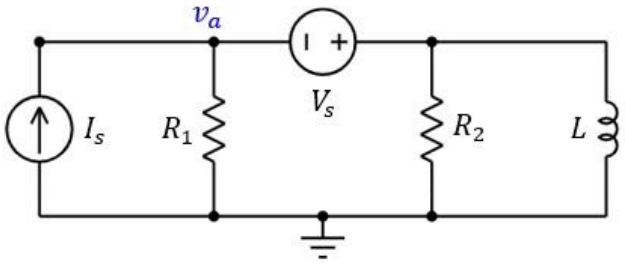
The voltage source V_s changes from *A* to 0 at t = 5 s, as shown on the right. For t < 5 s, you may assume the system has reached steady state. The voltage v_a is a node voltage.



(a) Find $v_a(5^-\ \text{s})$.

(b) Find $v_a(t)$ for t > 5 s. Write the equation.

R1:	1 Ω
R2:	2 Ω
Is:	2 A
A:	6 V
L:	2 nH



Q2

For t < 0 s, the switch has been opening and closing (and the capacitor may not have reached steady state).

<u>The switch closes at time t = 0 s.</u>

You are given the capacitor voltage at time $t = 4^-$ s:

$$v_C(4^-) = \text{X}$$

(a) Find $v_C(0^+\text{s})$. (You can leave your answer written as a function of *e*)

(b) The switch opens again at time t = 4 s. Find $v_C(6\ \text{s})$.

R1:	1 Ω
R2:	4 Ω
X:	3 V
Is:	1 A
C:	2 F