

Practice Problem 7.4

For the circuit in Fig. 7.18, find $i(t)$ for $t > 0$.

Answer: $2e^{-2t}$ A, $t > 0$.

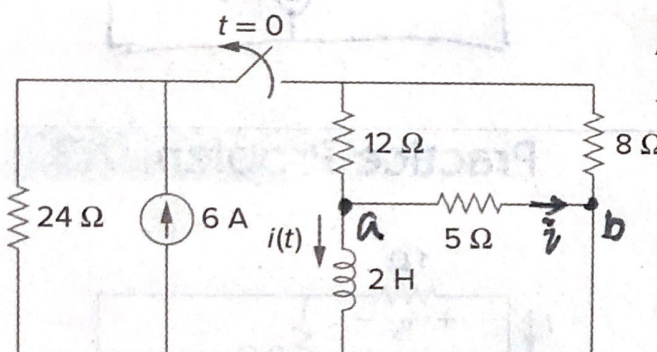


Figure 7.18
For Practice Prob. 7.4.

① $t=0^-$ 时. $V_a = V_b \Rightarrow i = \frac{V_a - V_b}{5} = 0 \Rightarrow 5\Omega$ 可拿掉

$\Rightarrow i(0^-) = 12\Omega$ 上的分流 } $i(0^-) = 6 \times \frac{1}{3} = 2A$
 $24 // 8 = 6\Omega$

② $R_{eq} = 20\Omega // 5\Omega = 4\Omega$

$\tau = L/R_{eq} = \frac{1}{2}$