Phasors 009

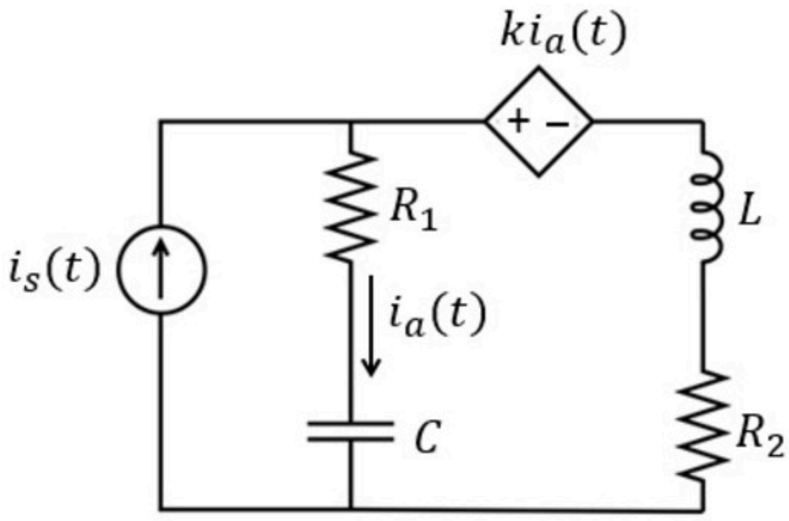
0 of 5 attempts made

$$i_s(t) = A_1 \cdot \cos\left(1000t + \frac{\pi}{2}\right) + A_2 \cdot \cos\left(2000t - \frac{\pi}{2}\right)$$

Assume the system is in steady state. Find the current i_a at times

$t_1 = 4\pi$ ms: $i_a(t_1) = B_1$

$t_2 = 5\pi$ ms: $i_a(t_2) = B_2$



Given Variables:

A1 : 1 A

A2 : 1 A

L : 1 mH

C : 250 uF

R1 : 1 ohm

R2 : 2 ohm

k : 4 V/A

Calculate the following:

B1 (A) :

-2.5 ✓

B2 (A) :

-1.5 ✓