PP Phasors 019

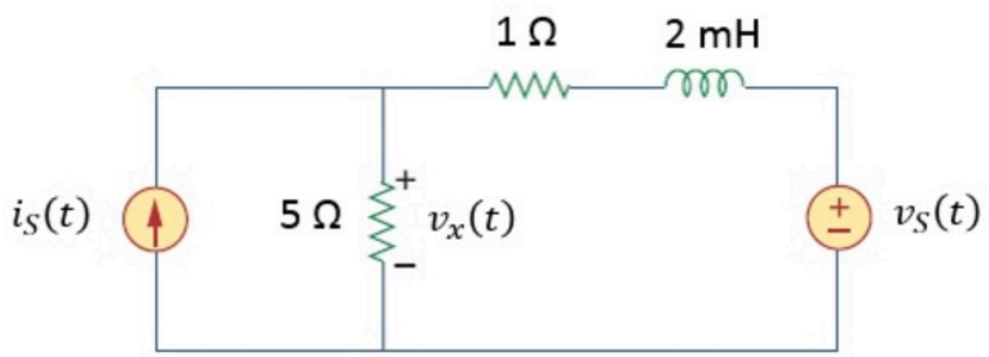
Unlimited Attempts.

$i_S(t) = 2\sqrt{2} \cdot \cos(1000t)$ A

$v_S(t) = 3\sqrt{2} \cdot \cos(3000t)$ V

Find $v_x(t) = A1 \cdot \cos(Wt + B1) + A2 \cdot \cos(3000t + B2)$.

(with $0 \leq A1, A2$ and $-180° \leq B1, B2 \leq 180°$)



Given Variables:

. : . .

Calculate the following:

A1 (V) :

5 ✓

W (rad/s) :

1000 ✓

B1 (degrees) :

45 ✓

A2 (V) :

2.5 ✓

B2 (degrees) :

-45 ✓

Hint: Use superposition.