



## **4B: Electricity and Magnetism Quiz 7**

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## Quiz Question

Two coils, held in fixed positions, have a mutual inductance of  $M$ . The current in the first coil is

$$i_1(t) = I_{\max} \cos(\omega t + \phi)$$

where  $I_{\max}$ ,  $\omega$ , and  $\phi$  are constants.

- (a) What is the peak emf in the second coil?
- (b) At what time(s) does the emf reach its peak in the second coil?