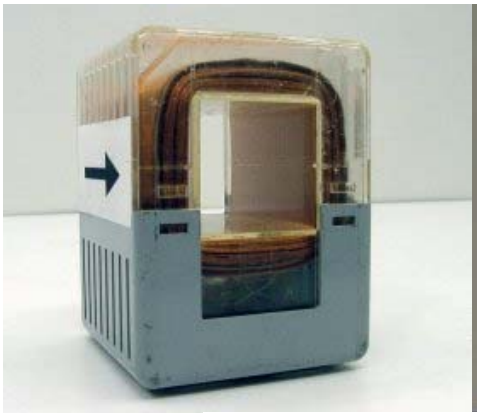
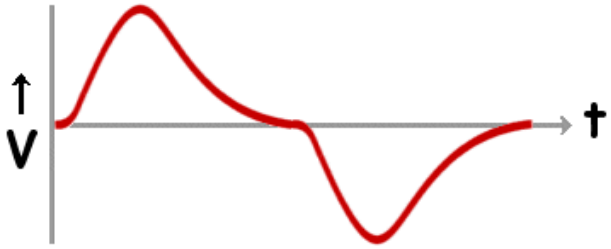
Question #226

A 500-turn coil is held adjacent to a small bar magnet as seen in the photograph at the center below. The North pole of the magnet is adjacent to the coil; a marker arrow has been placed on the coil to indicate the orientation of the coil for this experiment. The end view of the coil is shown in the photograph at the left. When the coil is thrust over the magnet and returned back to its original position after a short delay, the induced voltage as a function of time looks like the curve on the right. This can be seen experimentally by clicking your mouse on the photograph at the center.

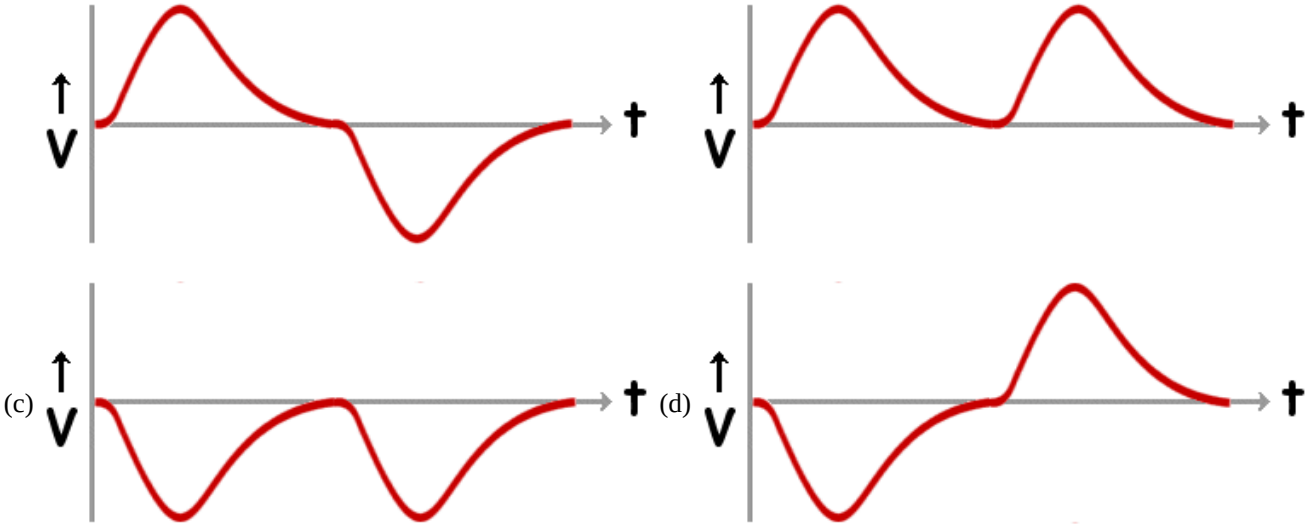




Now suppose that the magnet poles are reversed and the *South end of the magnet* is thrust into and out of the *coil* from the position shown in the photograph below.

Compared with the graph above, which of the following graphs will most nearly represent the voltage generated in this new case.

(a) (b)



Question:

- (a) graph (a).
- (b) graph (b).
- (c) graph (c).
- (d) graph (d).

Click here for Answer #226 after October 10, 2005.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact
Dr. Richard E. Berg by e-mail or using phone number or regular mail address
given on the Lecture-Demonstration Home Page.