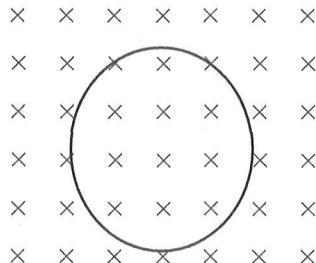


- 25 A conducting loop of area  $2.0 \times 10^{-2} \text{ m}^2$  is placed at right angles to a magnetic field, initially of strength  $5.0 \times 10^{-3} \text{ T}$  and directed into the page.



The magnetic field strength changes at a constant rate from  $5.0 \times 10^{-3} \text{ T}$  to  $-5.0 \times 10^{-3} \text{ T}$  in 4.0 s.

What is the magnitude of the induced electromotive force (e.m.f.)?

- A  $2.5 \times 10^{-5} \text{ V}$
- B  $5.0 \times 10^{-5} \text{ V}$
- C  $2.5 \times 10^{-5} \text{ V}$  Change to  $2.5 \times 10^{-3} \text{ V}$
- D  $5.0 \times 10^{-3} \text{ V}$

