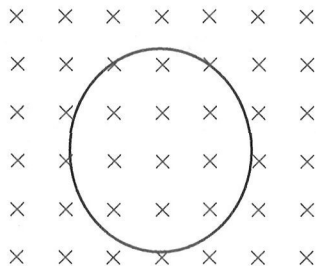


- 25** A conducting loop of area $2.0 \times 10^{-2} \text{ m}^2$ is placed at right angles to a magnetic field, initially of strength $5.0 \times 10^{-3} \text{ T}$ and directed into the page.



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 $5.0 \times 10^{-3} \text{ V}$

