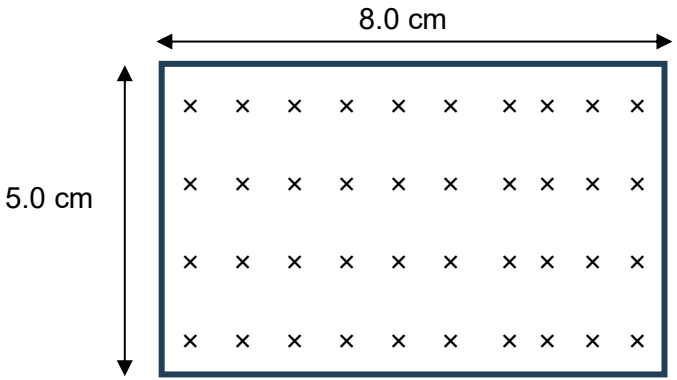
**27** A rectangular coil of length 5.0 cm and breadth 8.0 cm consists of 50 turns. It is placed in a uniform magnetic field of flux density 0.40 T such that the plane of the coil is perpendicular to the magnetic field and is directed into the page. The magnetic field is then uniformly reduced to zero in 0.20 s.




Which statement correctly describes the magnitude of the induced electromotive force (e.m.f.) and the direction of the induced current in the coil?

**A** Induced e.m.f. of 0.40 V and direction of current is clockwise

**B** Induced e.m.f. of 0.40 V and direction of current is anti-clockwise

**C** Induced e.m.f. of 0.80 V and direction of current is clockwise

**D** Induced e.m.f. of 0.80 V and direction of current is anti-clockwise