Magnetic Induction: Application (4)

A magnetic field $\vec{B}$ of increasing strength and directed perpendicular to the plane exists inside the dashed square. It induces a constant clockwise current $I = 8\text{A}$ in the large conducting square with resistance $R = 9\Omega$.

- If $\vec{B} = 0$ at time $t = 0$, find the direction $(\odot, \otimes)$ and magnitude of $\vec{B}$ at time $t = 5s$.