You may use for reference only the inside front and back covers of the textbook.

A square loop of wire lies on a table, a distance $s$ from a very long straight wire, which carries a current $I$, as shown in below.

a. Find the flux of $\vec{B}$ through the loop.

b. If someone now pulls the loop directly away from the wire, at speed $v$, what emf is generated? In what direction does the current flow?

c. What if the loop is pulled to the right at speed $v$, instead of away?

Faraday’s law: $\nabla \times \vec{E} = -\frac{d\vec{B}}{dt}$ or $\oint_C \vec{E} \cdot d\ell = -\frac{d}{dt} \int_S \vec{B} \cdot d\vec{a}$