

Loop 1

Loop 2

Loop 3

$\int \vec{B} \cdot d\vec{s}$ along left edge

$\int \vec{B} \cdot d\vec{s}$ along top

$\int \vec{B} \cdot d\vec{s}$ along right edge

$\int \vec{B} \cdot d\vec{s}$ along bottom

The line integral *around* the loop is simply the sum of these four separate integrals:

$\oint \vec{B} \cdot d\vec{s}$ around the loop