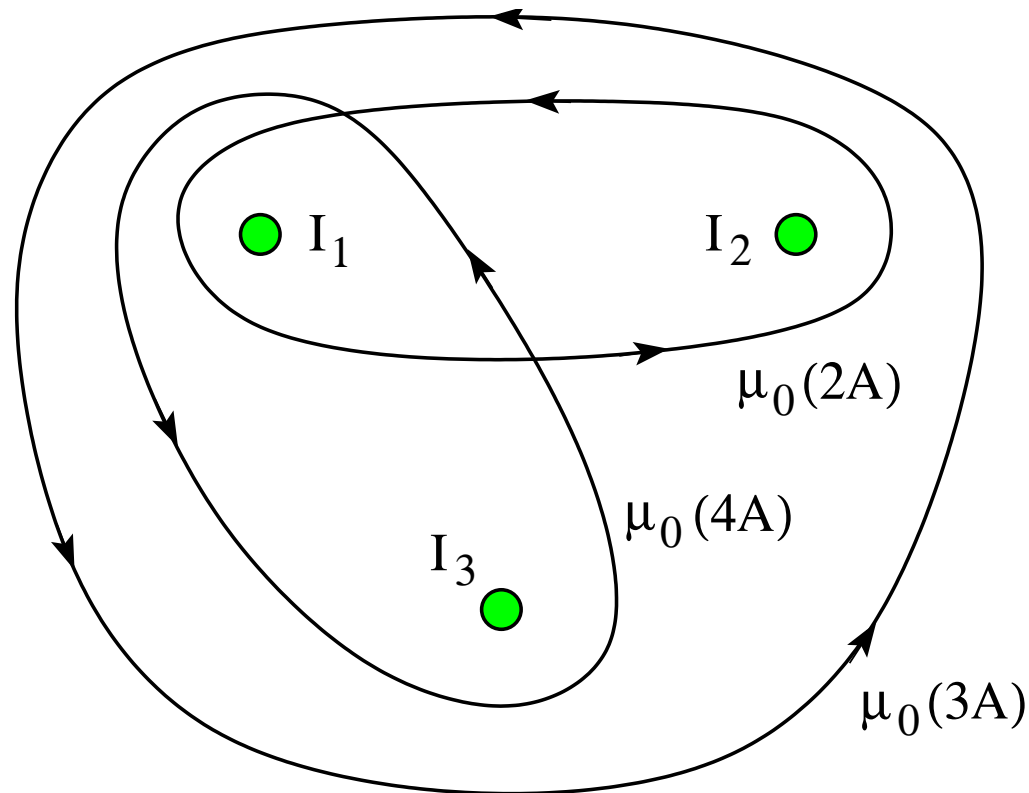


# Ampère's Law: Application (1)



The line integrals  $\oint \vec{B} \cdot d\vec{s}$  along the three Amperian loops are as indicated.

- Find the direction ( $\odot$ ,  $\otimes$ ) and the magnitude of the currents  $I_1$ ,  $I_2$ ,  $I_3$ .



## Ampère's Law: Application (2)



An electric current  $I$  flows through the wire in the direction indicated.

- Determine for each of the five Amperian loops whether the line integral  $\oint \vec{B} \cdot d\vec{s}$  is positive, negative, or zero.

