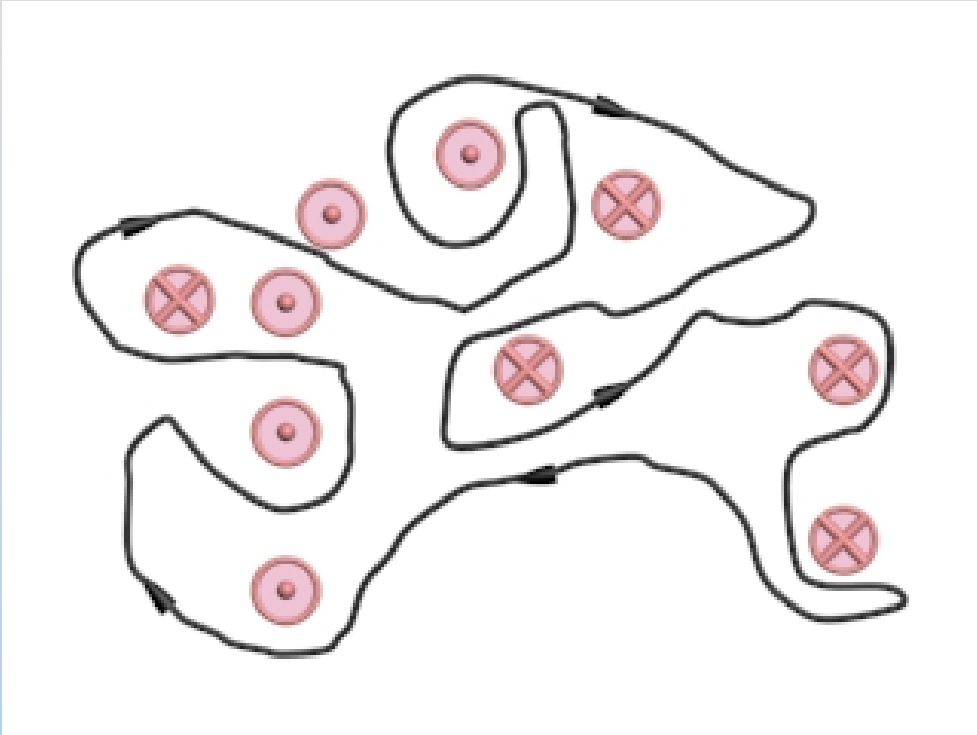
Concept Question: Question

The integral expression $\oint \vec{\mathbf{B}} \cdot d\vec{\mathbf{s}}$

1. is equal to the magnetic work done around a closed path
2. is equal to the current through an open surface bounded by the closed path.
3. is always zero.
4. is equal to the magnetic potential energy between two points.
5. None of the above.

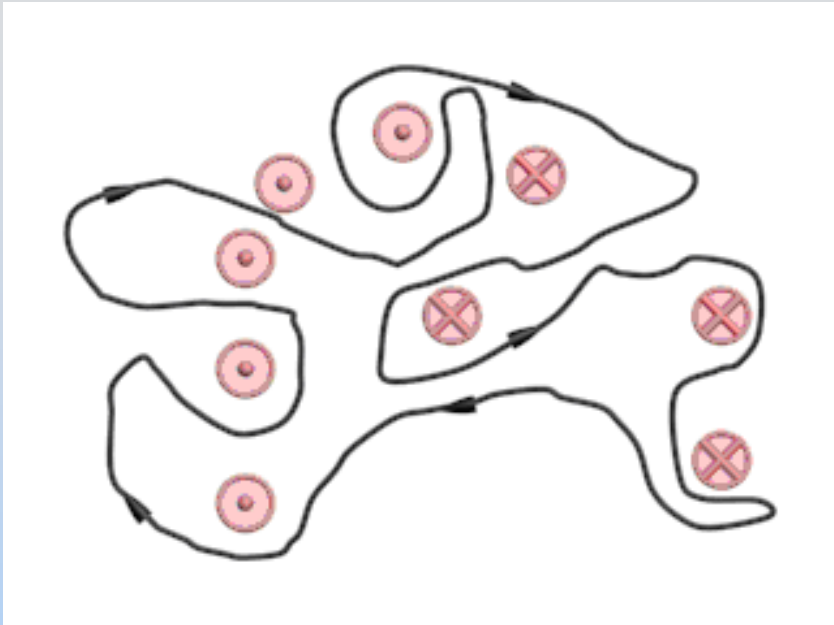
Concept Question: Ampere's Law



Integrating B around the loop shown gives us:

1. a positive number
2. a negative number
3. zero

Concept Question: Ampere's Law



Integrating B around the loop in the clockwise direction shown gives us:

1. a positive number
2. a negative number
3. zero

8.02SC Physics II: Electricity and Magnetism

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