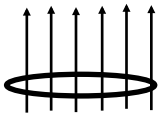
A loop sits in a B-field (which points in the +z direction). The loop lies in the x-y plane. Which would **NOT** change the magnitude of "magnetic flux" through the loop?



A: Tilt the loop out of the x-y plane.

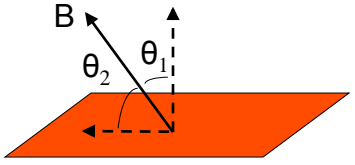
B: Rotate the loop around the z-axis

C: Increase the radius of the loop

D: Tilt the direction of the B-field.

E: (More than one, or none)

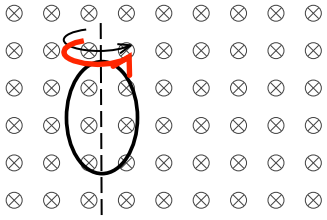
Magnetic flux tells you "how much of the B field pokes through an area" The formula for flux is $\Phi_B = B_\perp A = BA\cos\theta$.
But, WHICH of the two angles labeled θ is the one you need in the formula?



A: θ_1
B: θ_2
C: Either one!
D: Neither one seems right?

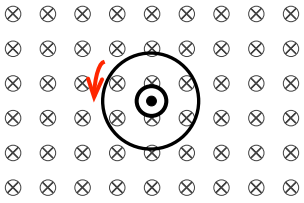
A loop of wire spins rapidly in a uniform B- field. (It rotates in & out of the plane of the page) Is a non-zero EMF (voltage) induced in the loop?

A: Yes, there is B: No, there is not

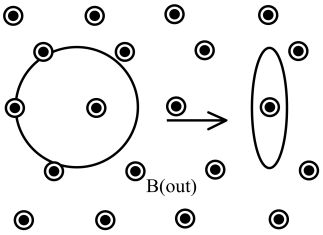


What if that loop were spun around an axis oriented perpendicular to the plane of the page, running through the center? Is a non-zero EMF induced in the loop?

A: Yes, there is B: No, there is not

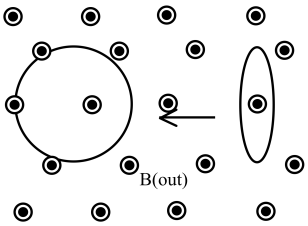


A loop of wire sits in a uniform, constant B field.
Suddenly, the loop is bent into a smaller area.
During the bending of the loop, the induced current in the loop is



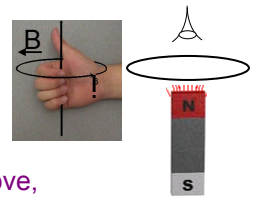
A: CW
B: CCW
C: No curre

A loop of wire sits in a uniform, constant B field.
Suddenly, the loop is stretched into a larger area.
During the stretching of the loop, the induced current in the loop is



A: CW
B: CCW
C: No current

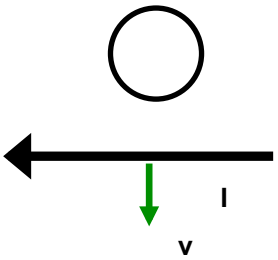
A bar magnet is positioned below a loop of wire.
The magnet is pulled down, away from the loop.



As viewed from above,
is the induced current in the loop
A) clockwise  B) CCW
C) zero?

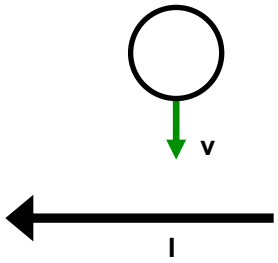
A current-carrying wire is pulled away from a conducting loop. As the wire moves, is there a current induced around the loop?

A: Yes, CW
B: Yes, CCW
C: No



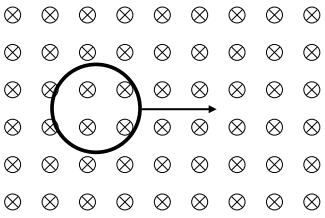
A conducting loop is pulled towards a wire carrying a steady current. As the loop moves, is there a current induced around the loop?

A: Yes, CW
B: Yes, CCW
C: No



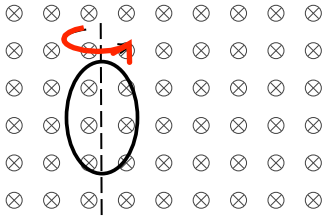
A loop of wire is moving rapidly through a uniform magnetic field as shown.
Is a non-zero EMF induced in the loop?

A: Yes, there is B: No, there is not



A loop of wire spins rapidly in a uniform B- field. (It rotates in & out of the plane of the page) Is a non-zero EMF (voltage) induced in the loop?

A: Yes, there is B: No, there is not



What if that loop were spun around an axis oriented perpendicular to the plane of the page, running through the center? Is a non-zero EMF induced in the loop?

A: Yes, there is B: No, there is not