Quiz 4c

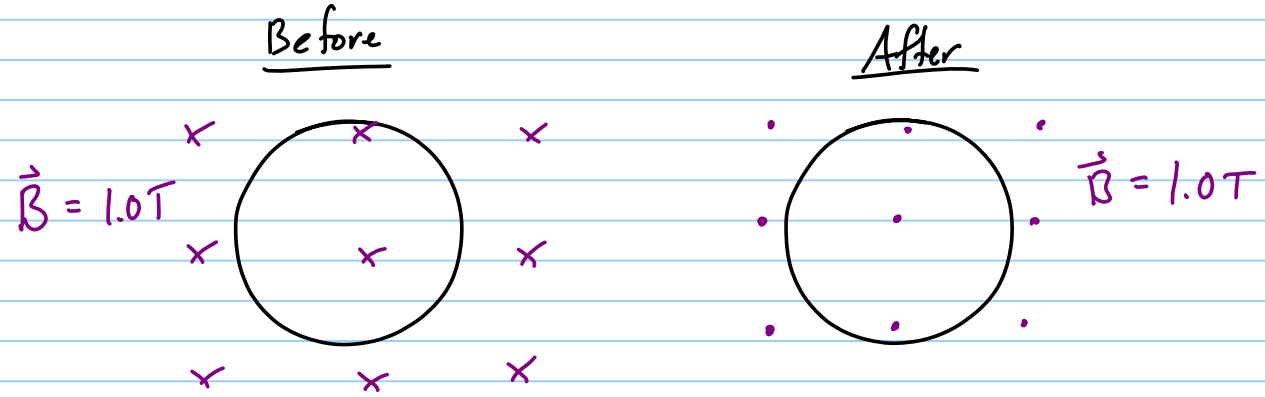
Note Title 27/05/2011

A circular coil of 20 loops and a radius of 12 cm sitting in a mag field of 0.8 T directed out of the page. The loop is removed from the field in 0.25 s.

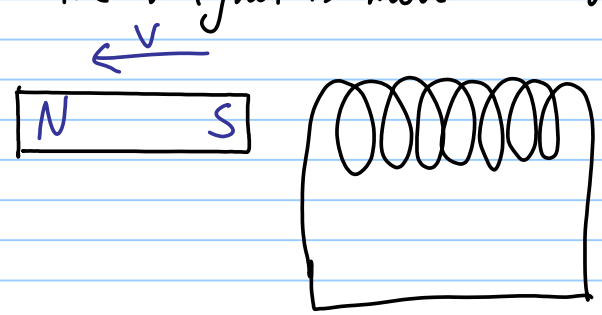
a. What is the average induced EMF?

b. What direction does the current flow?

2.) What direction does current flow in the loop shown?



3) Show the north and south poles induced in the solenoid (coil) when the magnet is moved as shown.



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a. What is the average induced EMF?

b. What direction does the current flow?

$\times = +$

$\bullet = -$

a. $\mathcal{E} = \frac{-N\Delta\Phi}{t} = \frac{-N\Delta BA}{t} = \frac{-(20)(0-(-0.8T))\pi(0.12m)^2}{0.25s}$

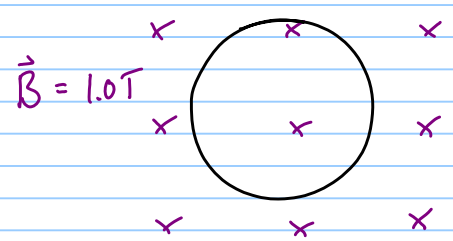
$= -2.9V$

Text

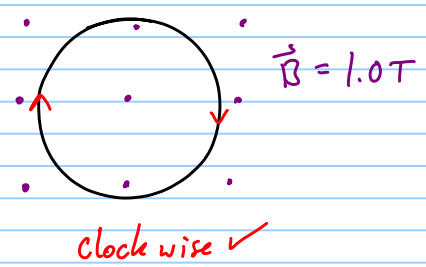
b. EMF is negative therefore point thumb out of page from RHR current is counter clockwise

2.) What direction does current flow in the loop shown?

Before



After



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