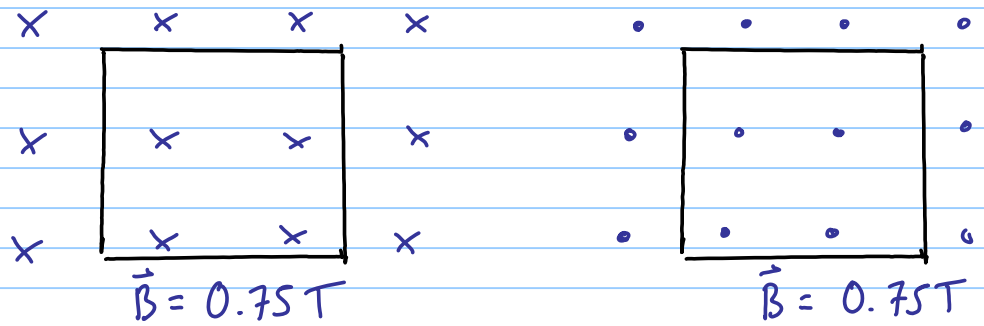
Quiz 4a

Note Title 27/05/2011

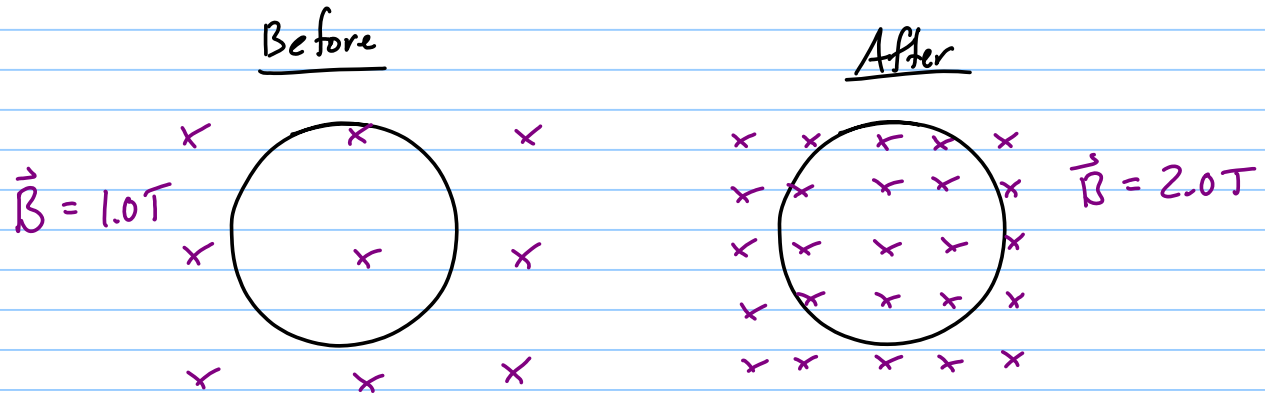
1.) A square loop, 15 cm per side sits in a magnetic field of 0.75 into the page. The field is changed to 0.75T out of the page in 0.010 s.

a. How much EMF is generated?

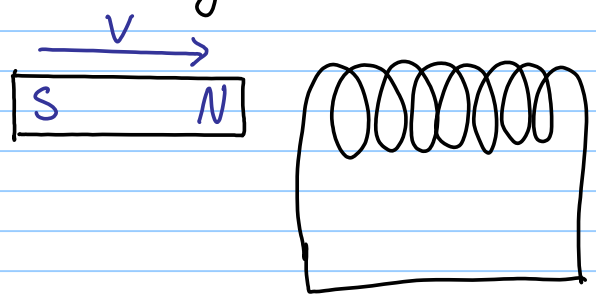
b. What direction does the current flow?



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



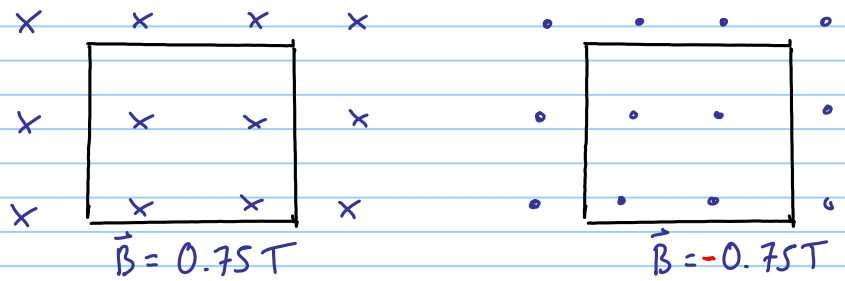
3) Show the north and south poles induced in the solenoid (coil) when the magnet is moved as shown.



1.) A square loop, 15 cm per side sits in a magnetic field of 0.75 into the page. The field is changed to 0.75T out of the page in 0.010 s.

a. How much EMF is generated?

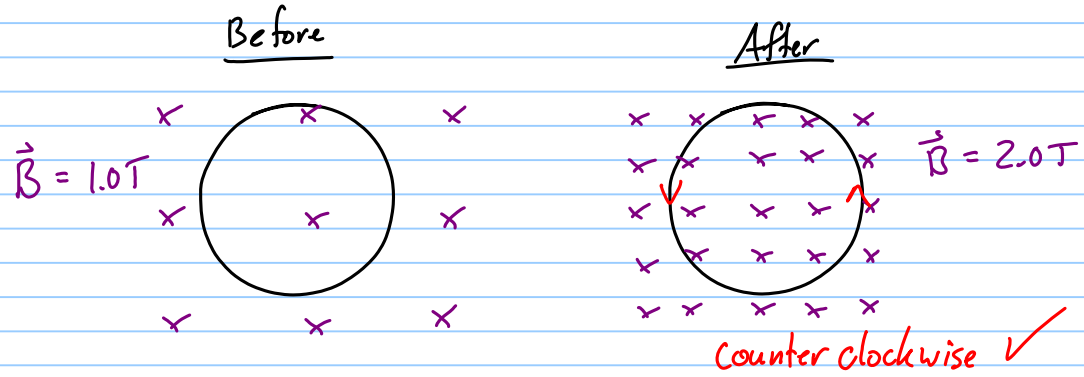
b. What direction does the current flow?



a.) $\mathcal{E} = -\frac{N \Delta B A}{t} = -\frac{(1)(-0.75T - 0.75T)(0.15m)^2}{0.010\,s} = 3.4\,V$ ✓

b.) current is clockwise ✓

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.