

33.9. Visualize: Please refer to Figure Ex33.9. The changing current in the solenoid produces a changing flux in the loop. By Lenz's law there will be an induced current and field to oppose the change in flux.

Solve: The current shown produces a field to the right inside the solenoid. So there is flux to the right through the surrounding loop. As the current in the solenoid decreases there is less field and less flux to the right through the loop. There is an induced current in the loop that will oppose the *change* by creating an induced field and flux to the right. This requires a *clockwise* current.