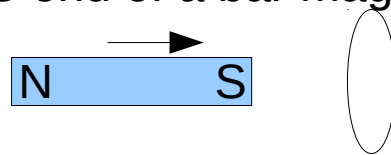


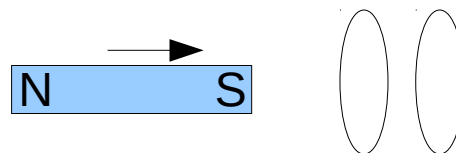
Approach a circular wire loop with the S end of a bar magnet. You observe a _____ induced current

- a) clockwise
- b) counterclockwise



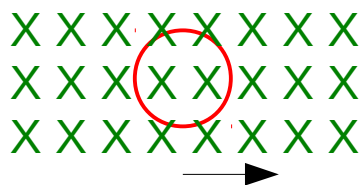
Suppose the maximum current in the above example is 5 mA. If I repeat the above with an additional wire loop (#2) just behind the first (#1), what is the maximum current in #1?

- a) <5 mA
- b) 5 mA
- c) >5 mA



A wire loop moves through a uniform B field. What is the induced current in the loop if v is constant (and thus a is zero)?

- a) zero
- b) non-zero



What if v is not constant (and thus a is non-zero)?

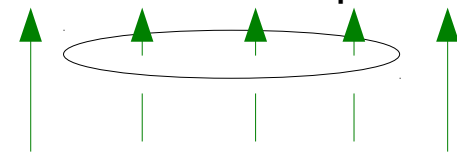
- a) zero
- b) non-zero

Consider a conducting, elastic loop stretched to a radius $r = 12$ cm. When released, the loop radius shrinks at a rate of 75 cm/s. An external B field is 0.80 T.

a) What is the induced emf?

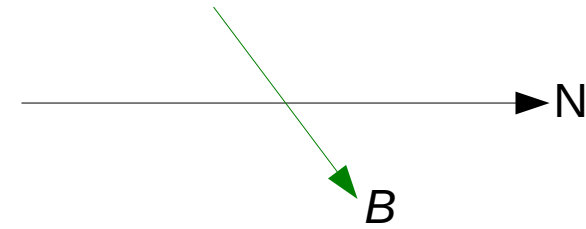
b) If the resistance is $R=9.0 \Omega$, what is the induced current?

c) If viewed from above, in which direction does the induced current flow?



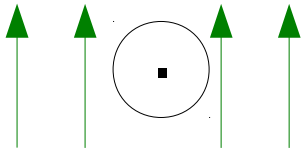
The Earth's B field points into the ground at Laramie, at an angle of 70° to the horizontal, towards the North (with amplitude $\sim 60 \mu\text{T}$).

a) Suppose a long conductor carrying 500 A is lying on the ground, in a N-S orientation. What is F_B on a 100 m segment?



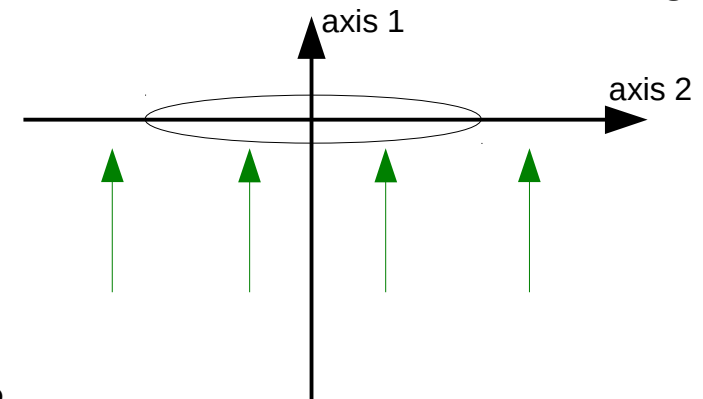
b) If I climb the classroom building and drop a metal loop down, in which direction is the induced current, as viewed from above?

A long wire with current 100 A is held perpendicular to a 5 mT B field. Where is the net B zero?



A wire loop is perpendicular to a uniform B field. In which direction is the induced current flowing if I spin the loop about axis #1? about axis #2?

- a) **no current**
- b) **clockwise as viewed from above**
- c) **counter-clockwise as viewed from above**



An electron zooms into a uniform B field. Which way will it turn?

- a) **to "its" left**
- b) **to "its" right**

