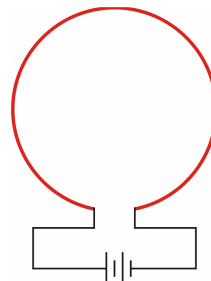
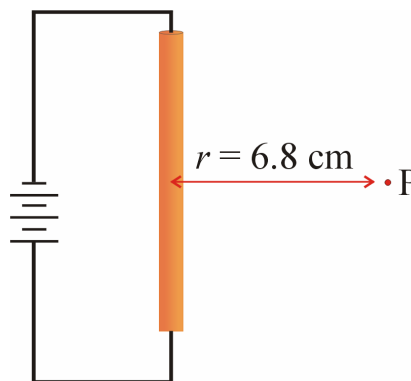


**Right Hand Rules Review**

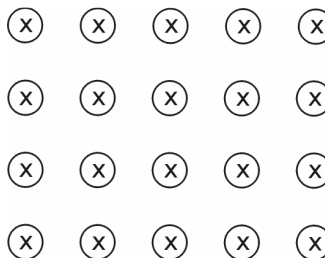
1. What is the direction of the magnetic field at the centre of the conducting loop shown here?



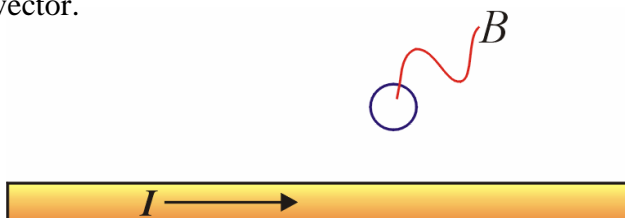
2. What is the direction of the magnetic field at the point labeled **P**, 6.8 cm to the right of the current carrying wire?



3. For the magnetic field represented in the diagram below; is the north pole behind or in front, above or below, on the left or on the right?



4. What is the direction of the magnetic field at the position labeled **B** due to the conventional current in the wire labeled **I**? Fill in the circle with the appropriate symbol to represent the direction of the magnetic field vector.

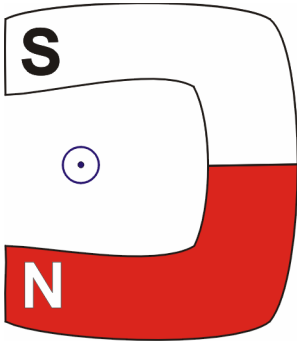


5. The three drawings below represent a horseshoe magnet and an electric current carrying wire. The wire is between the poles of the magnet. A cross-section of the wire is represented with the conventional current pointing out of the plane of this page.

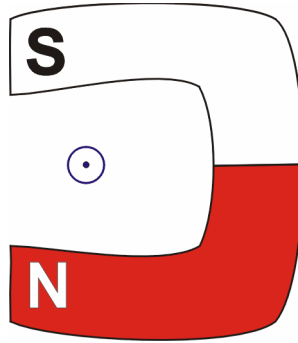
a) On the first diagram, represent the direction of the magnetic field of the horseshoe magnet by drawing some arrows in the appropriate direction.

b) On the second diagram, represent the direction of the magnetic field of the electric current by drawing an arrow in the appropriate direction.

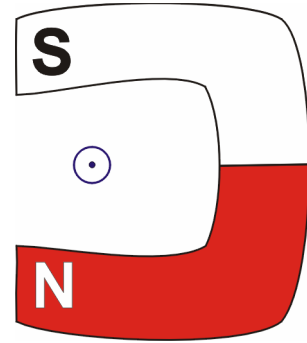
c) On the third diagram, represent the direction of the magnetic force acting on the wire by drawing a larger arrow in the appropriate direction.



a)

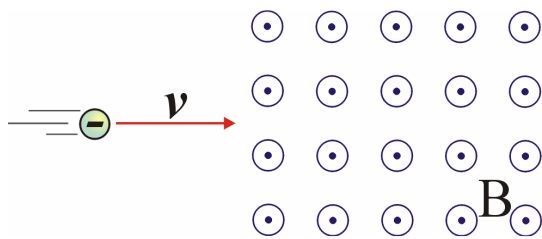


b)

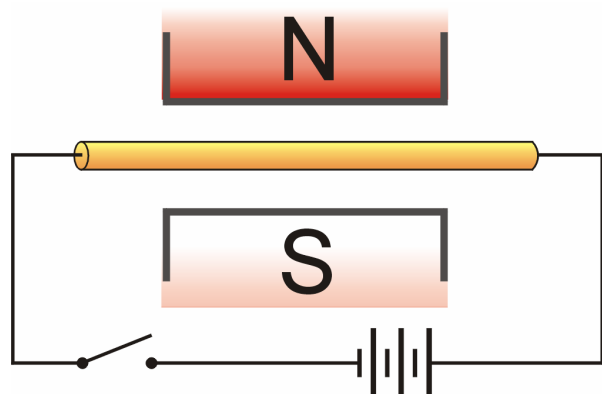


c)



6. The negatively charged subatomic particle shown below is about to enter a uniform magnetic field. What will be the direction of the magnetic force on the charge when it first enters the magnetic field? Assuming the charge is trapped by the magnetic field and revolves in uniform circular motion; will it orbit clockwise or counterclockwise?



7. This diagram shows a wire in a magnetic field. What will be the direction of the force on the current carrying wire when the switch is closed?



**Answers:**

1. in   2. in   3. in front   4.) out /  $\odot$    5 a)  $\uparrow\uparrow\uparrow$    b)    c) 
6.  $\uparrow$ , c.c.w.   7. out ( $\odot$ )