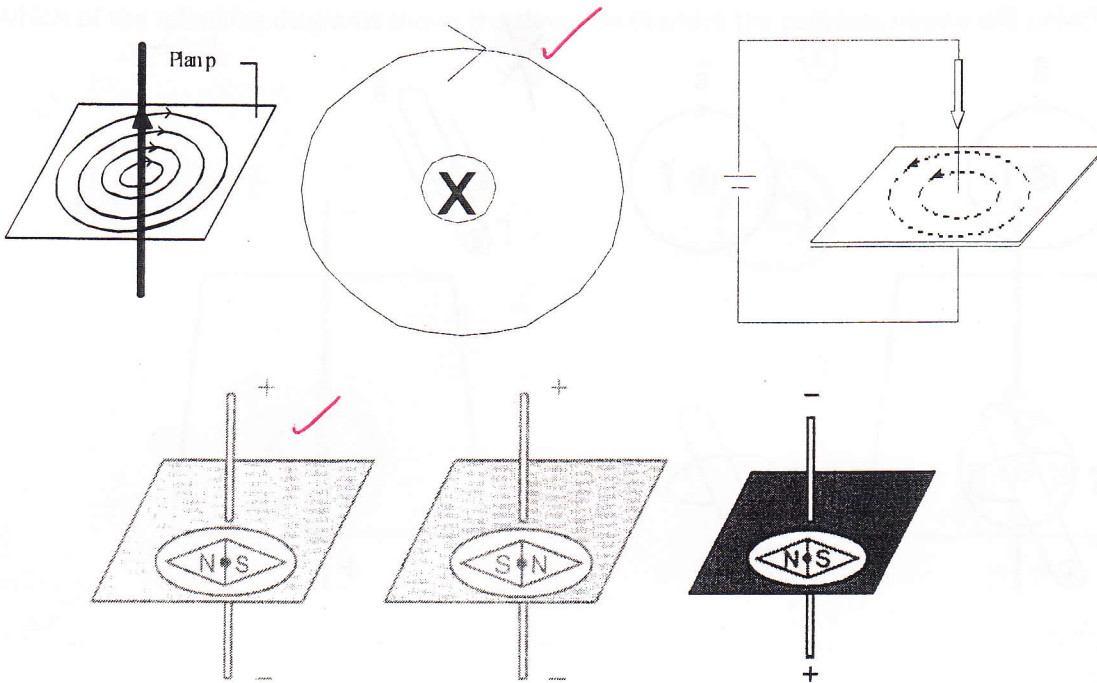


# Straight wire worksheet

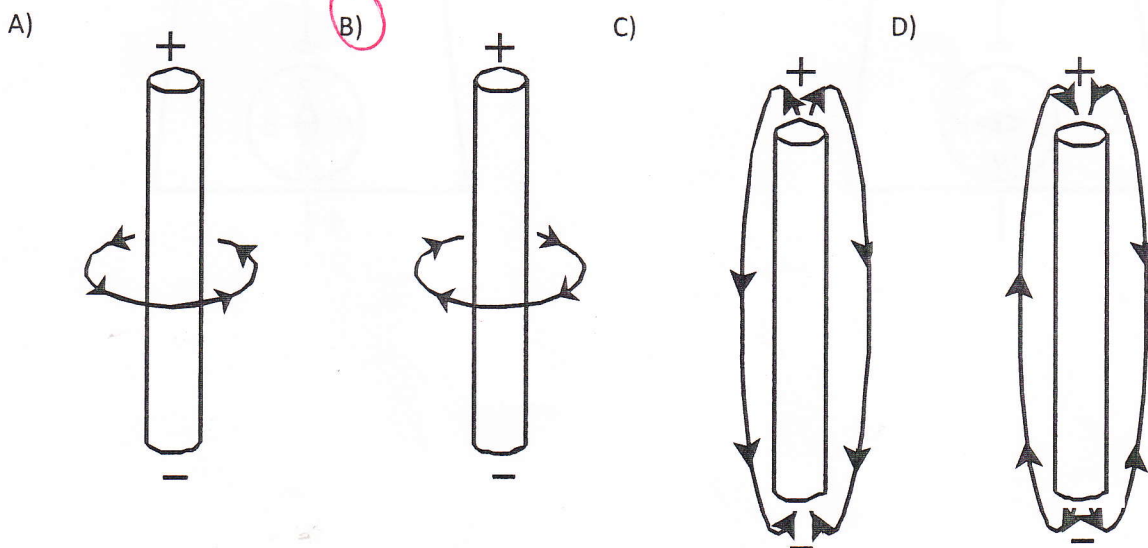
2011-2012

- Which diagram(s) correctly show the relationship between the magnetic field and the electric current producing it?



- An electric current flows through a straight wire and produces a magnetic field.

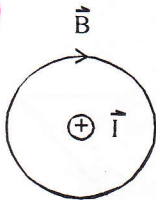
Which of the following diagrams correctly represents this magnetic field?



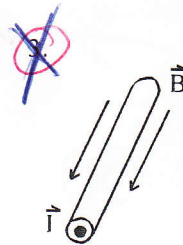
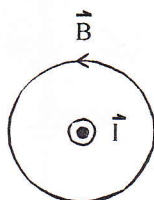
3. Study the five diagrams below.

Which diagram(s) correctly show the relationship between a magnetic field and the electric current producing it?

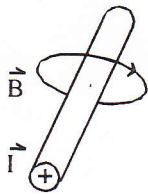
1.



2.



4.



5.



Legend :

● electron flow "out of the paper"

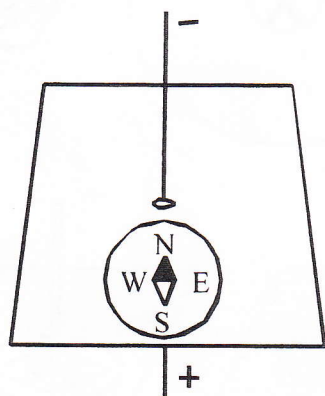
⊕ electron flow "into the paper"

4. A copper wire with a current flowing through it passes through a piece of cardboard as shown in the diagram to the right.

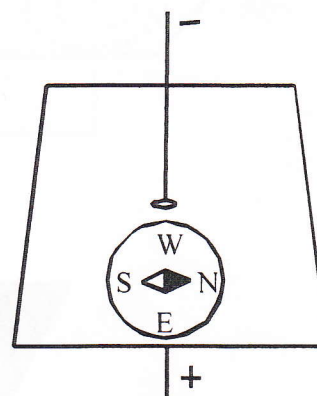
A magnetic compass is placed on the piece of cardboard near the wire.

Which of the following diagrams shows the direction in which the compass needle will point?

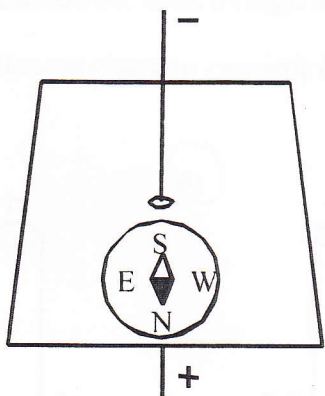
A)



C)



B)



D)

