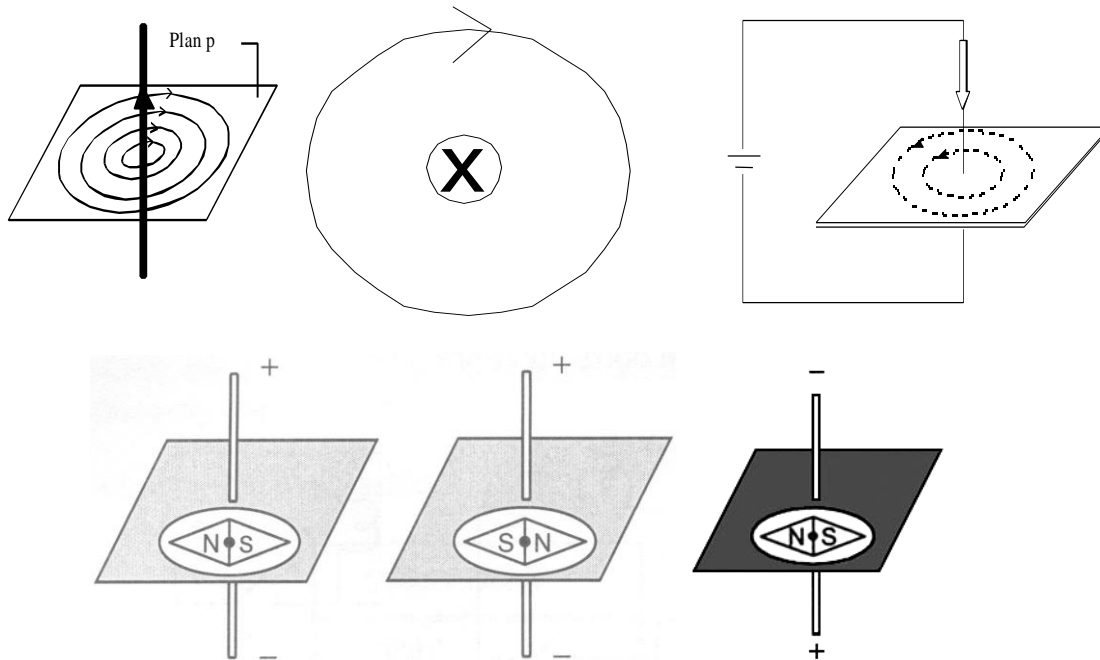


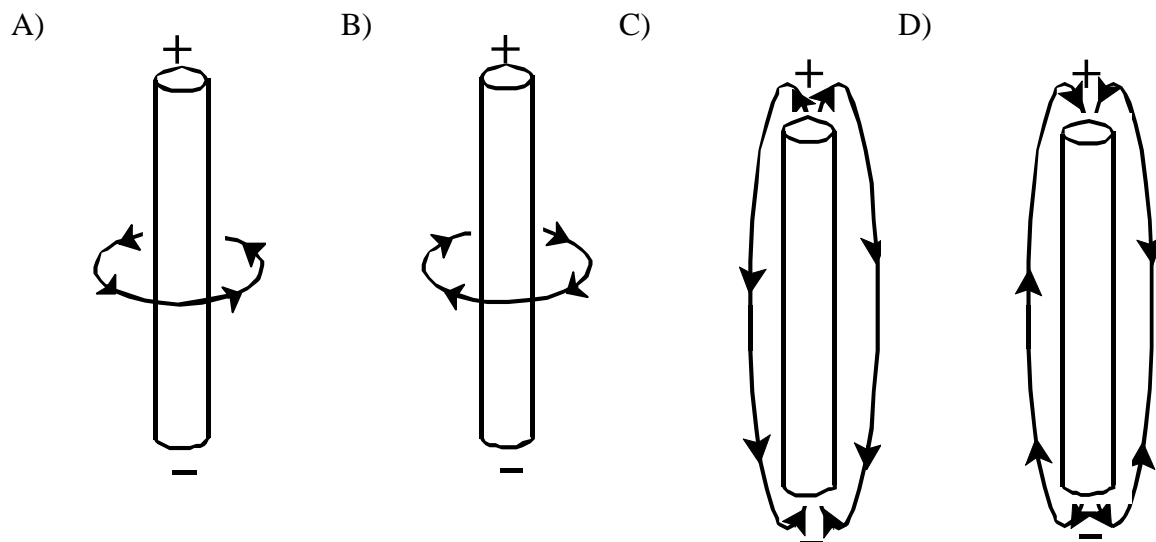
Straight wire worksheet

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



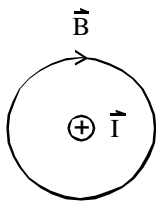
2. An electric current flows through a straight wire and produces a magnetic field.

Which of the following diagrams correctly represents this magnetic field?

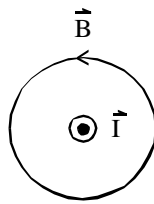


3. Which diagram(s) correctly show the relationship between a magnetic field and the electric current producing it?

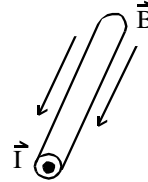
1.



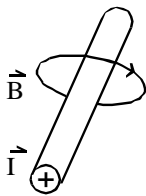
2.



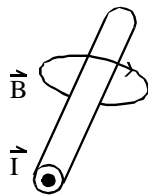
3.



4.



5.

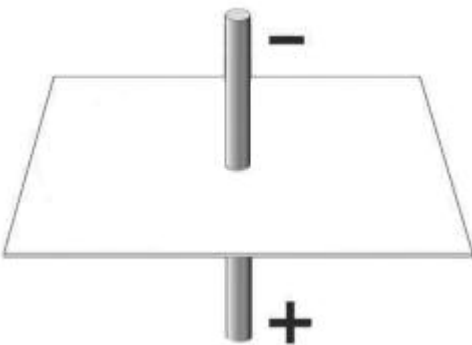


Legend :

● electron flow "out of the paper"

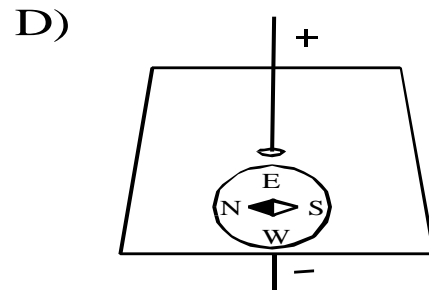
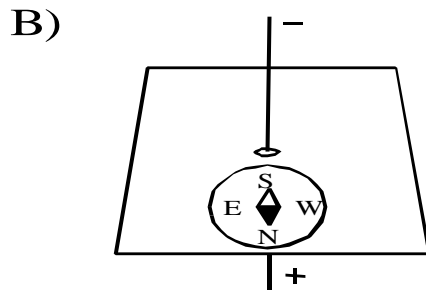
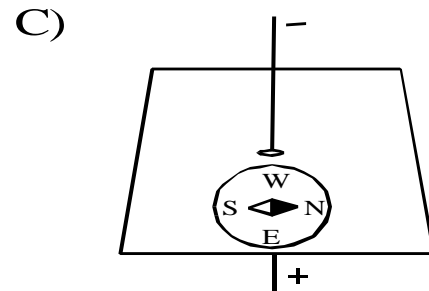
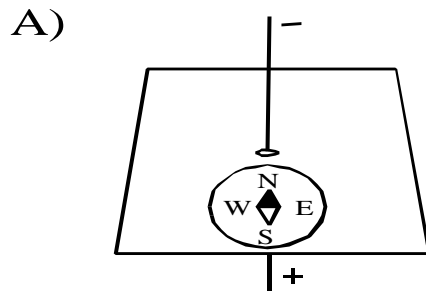
⊕ electron flow "into the paper"

4. Show the current direction for the straight wire.

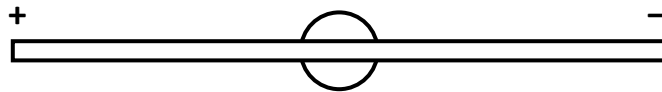


5. A magnetic compass is placed on the piece of cardboard near the wire.

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



6. Put in the compass direction for the straight wire.



7. Which of the illustrations below is an accurate representation of the magnetic field of a live wire? Explain your answer.

