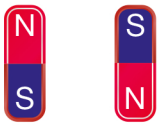
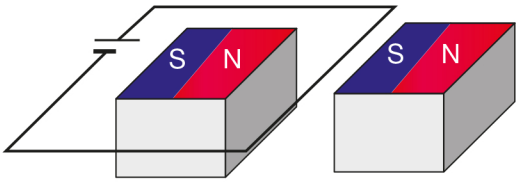
REVIEW IT! Electromagnetism

1 Draw the magnetic field lines from the two magnets.

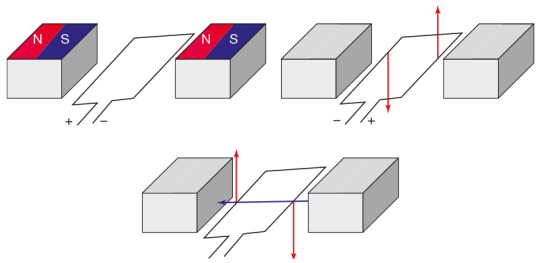


2 **a** Show on the diagram the direction of the current, *I*, the direction of the magnetic field, B, and the direction of movement of the wire, *F*.



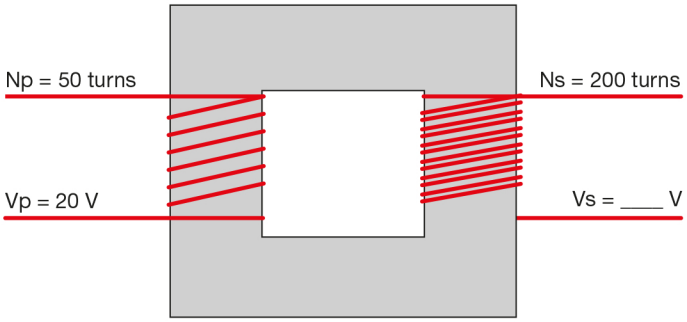
b Suggest three changes to the system in the above system that would increase the force on the wire.

3 Complete the diagrams to show the missing poles, the direction of the magnetic fields and the direction of movement of the wire.



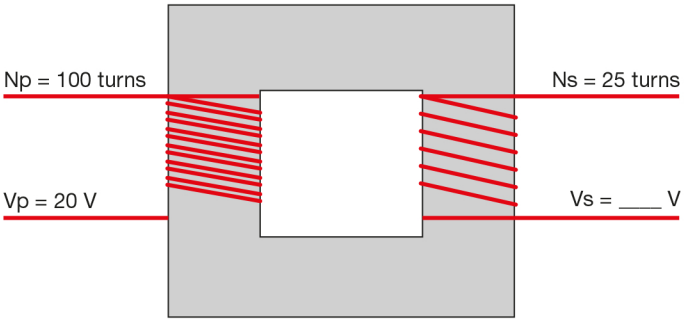
4 A copper wire of length 23 cm carrying a current of 0.43 A is immersed perpendicularly in a magnetic field of magnetic flux density 0.34 T. Calculate the force applied on the wire.

H5 **a** **i** Calculate the potential difference in the secondary coil.



ii Calculate the current in the secondary coil, knowing that $I_p = 8$ A.

b **i** Calculate the potential difference in the secondary coil.



ii Calculate the current in the secondary coil, knowing that $I_p = 3$ A.