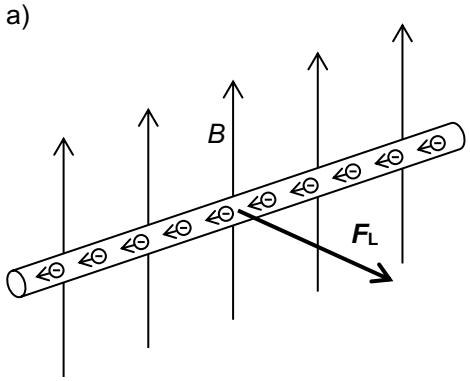
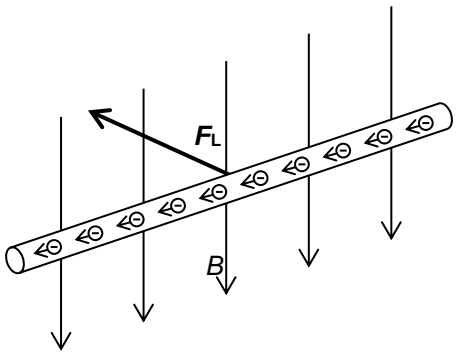
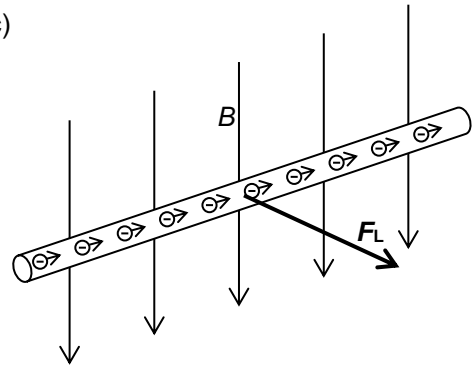
1. a)



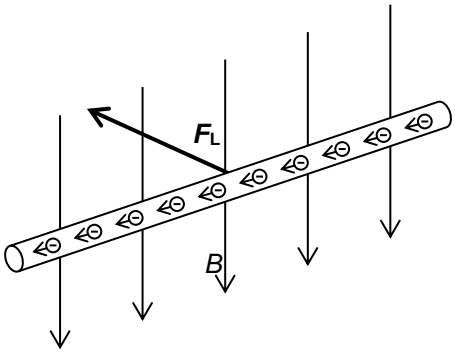
b)



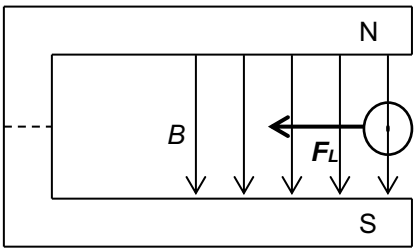
c)



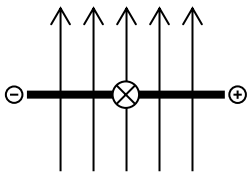
d)



2.



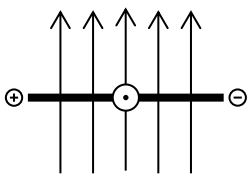
3. a)



$F_L = I \cdot B \cdot s = 3.5\ \text{A} \cdot 0.05\ \text{T} \cdot 0.09\ \text{m} = 0.0158\ \text{N} = \underline{16\ \text{mN}}$

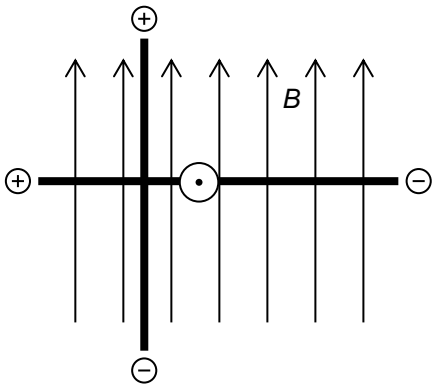
b) Es wirkt keine Lorentzkraft, da der Draht parallel zu den Magnetfeldlinien verläuft.

c)



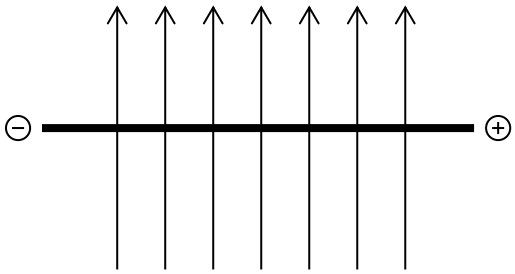
$F_L = I \cdot B \cdot s = 33 \cdot 10^{-6}\ \text{A} \cdot 33 \cdot 10^{-6}\ \text{T} \cdot 33 \cdot 10^{3}\ \text{m} = \underline{3.6 \cdot 10^{-5}\ \text{N}}$

4. a)

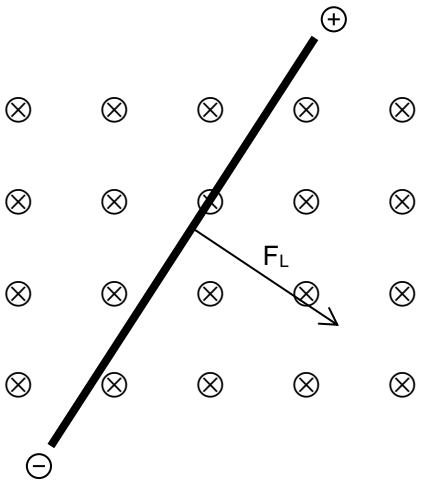


Auf den Leiter parallel zum Magnetfeld wirkt keine Lorentzkraft

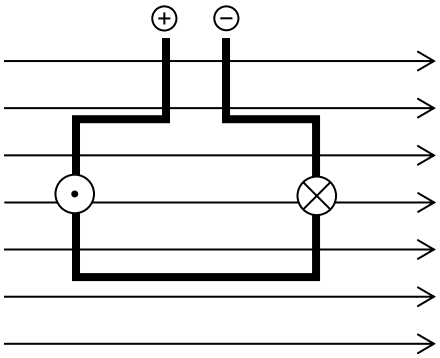
b)



c)



d)



Auf das Leiterstück parallel zum Magnetfeld wirkt keine Lorentzkraft.