

# task\_76ksbc114ylxftfl\_with\_calculation

## Student Group

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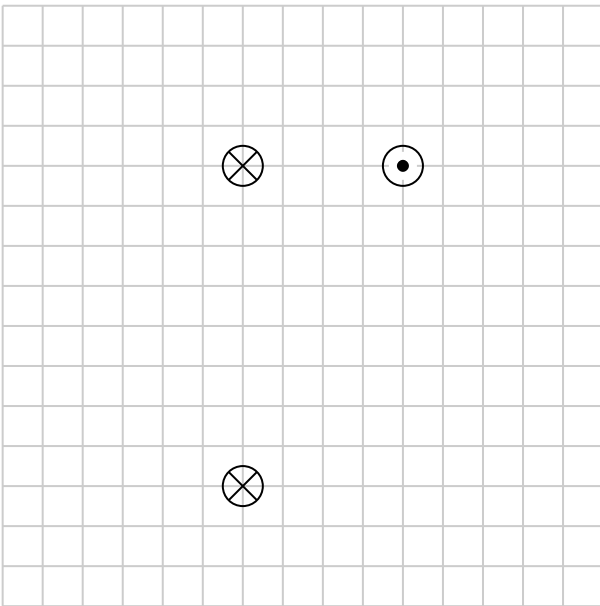
magnetostatic, field lines, exam ee2 SS2021

### Exercise E1 Resistance of a Wire by Resistivity (written test, approx. 4 % of a 120-minute written test, SS2021)

Several parallel conductors are projecting out of the plane.

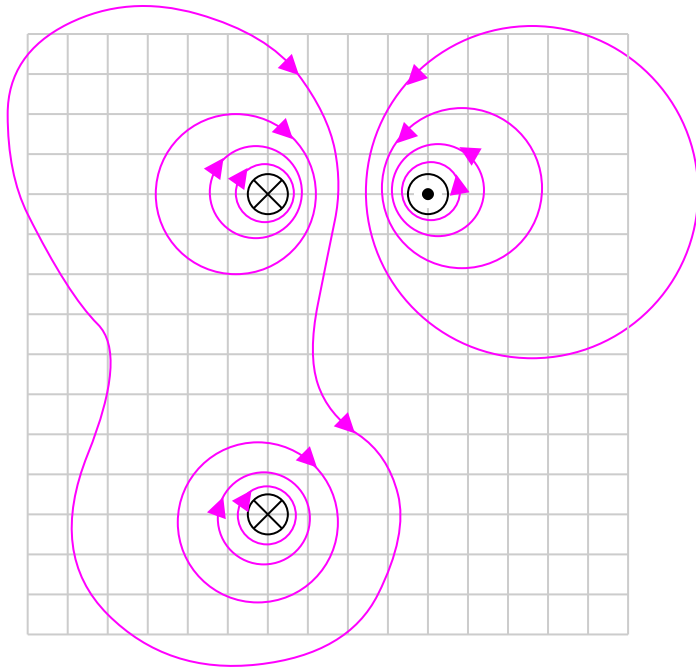
The same current  $I$  flows through all the conductors in different directions (see image below).

Sketch at least 10 field lines of the magnetic field strength  $\vec{H}$  in such a way that the different properties of the field lines (e.g. direction and density) can be seen.



Result

- high density of field lines near the conductors
- direction of the field lines given by the right-hand rule
- magnetic field has closed field lines
- resulting field given by superposition of field lines



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