

CONCEPTUAL PROBLEMS, Chapter 30

Phys 2401, Dr. Huang

Fill in a **T/F** answer for each statement below:

1. [] Magnetic fields are produced either by electric currents or time-varying electric fields.
2. [] Magnetic field lines, generated by a long straight wire carrying a current, are circles concentric with the wire and lie in planes perpendicular to the wire.
3. [] Parallel conducting wires carrying currents in the same direction repel each other.
4. [] Gauss's law of magnetism states that the net magnetic flux through any closed surface is zero.
5. [] Unlike electric field lines, magnetic field lines are continuous and always form closed loops.
6. [] For an ideal solenoid, the interior magnetic field is uniform and the exterior field is zero.
7. [] The magnetic field inside a toroid is uniform.