

Direction of Current, Magnetic Field and Force for a Current Carrying Wire in a Magnetic Field

A current is flowing through a wire in a magnetic field.

Given the direction of the current and the magnetic field, determine the direction of the force on the wire.

Current	Magnetic Field	Force
East	North	
Up	North	
Right	Up	
Left	Towards you	

Given the direction of the current and the resulting force on the wire, determine the direction of the magnetic field.

Current	Magnetic Field	Force
West		Down
Up		West
Right		Towards you
Left		Down

Given the direction of the magnetic field and the resulting force on the wire, determine the direction of the current.

Current	Magnetic Field	Force
	North	Up
	Up	Towards you
	Away from you	Down
	Left	Away from you