

Name _____

Favorite Composer/Songwriter _____

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1. 18.2 A of current flow east along a wire in a magnetic field of 0.0150 T that is 17.0° east of North. What force acts on the wire if it is 113 m long? (Magnitude and direction)

2. A 4.2 Amp current flows North in a wire that is 12.1 cm long. What is the magnetic field (Assume it is perpendicular) if the wire experiences a vertically upward force of 12.15 N? (Magnitude and direction)

3. An electron travels at 3.5×10^4 m/s to the North, and experiences a force of 2.1×10^{-14} N vertically downward. What is the magnitude and direction of the magnetic field exerting this force?

4. A proton is going 1.71×10^5 m/s in the plane of the page in a 2.30 T magnetic field out of this page. What is the radius of its path? Which direction does it circle, ACW or CW?

5. What **electric field** in what **direction** would make the particle go straight up the page in the previous problem?