

12 Magnetic fields and forces – Part 1

—Answers

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Work through these after you have tried the questions yourself.

2.1 from the north pole to the south pole.

2.2 $F = qvB = 2.0 \times 10^{-19} \times 1.0 \times 10^5 \times 0.40 = 8.0 \times 10^{-15} \text{ N}$.

2.3 a circle.

2.4 $F = BIL = 0.10 \times 3.0 \times 0.50 = 0.15 \text{ N}$.

2.5 when it is stationary, or when it moves along (parallel to) the field lines.