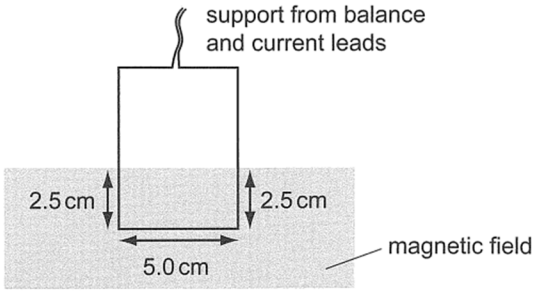
30 A single-turn rectangular wire loop hangs from a balance reading in grams so that its lower part is in a region of uniform magnetic field. The direction of the field is at right-angles to the plane of the loop. The arrangement is as shown in the diagram.



When there is no current in the loop, the reading of the balance is 10.060 g. When the current in the loop is 3.0 A, the balance reading is 10.040 g.

What is the magnitude of the flux density of the field?

A 6.5×10^{-4} T

B 1.3×10^{-3} T

C 1.3×10^{-2} T

D 6.6×10^{-1} T