

Physics 250 UnQuiz 6

Two wires of length L carry currents I_1 and I_2 and are separated by a distance w as shown. Answer the following.

(a) which direction are the magnetic fields directed (show by $\times$ or $\cdot$ in the circles)

(b) What is the magnitude of $B_{@1}$ from 2 and $B_{@2}$ from 1?

(c) Show the direction of the force on wire 1 and wire 2 with arrows and proper labels.

(d) If $I_1 = I_2$, find the magnitude of the force on wire 1.

(e) if $I = 1$ A and $w = 1$ m, provide numerical answers with correct SI units for B and F .

