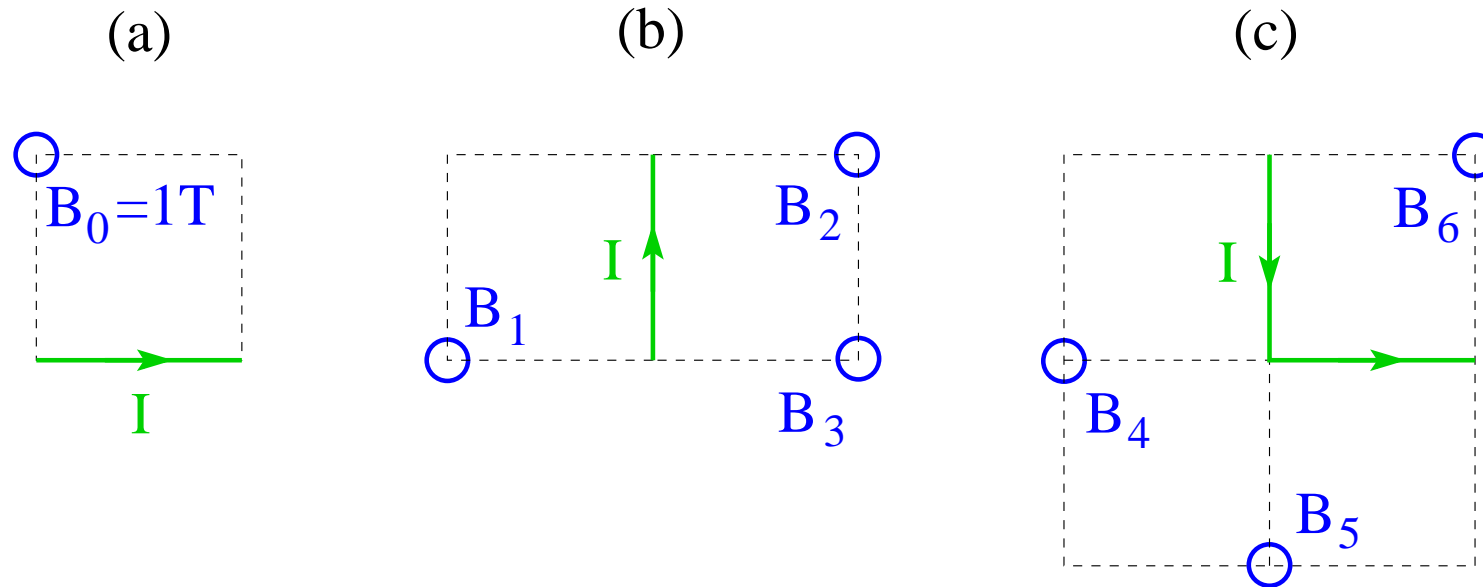If the current I in (a) generates a magnetic field $B_0 = 1T$ pointing out of the plane

- find magnitude and direction of the fields B_1, B_2, B_3 generated by I in (b),
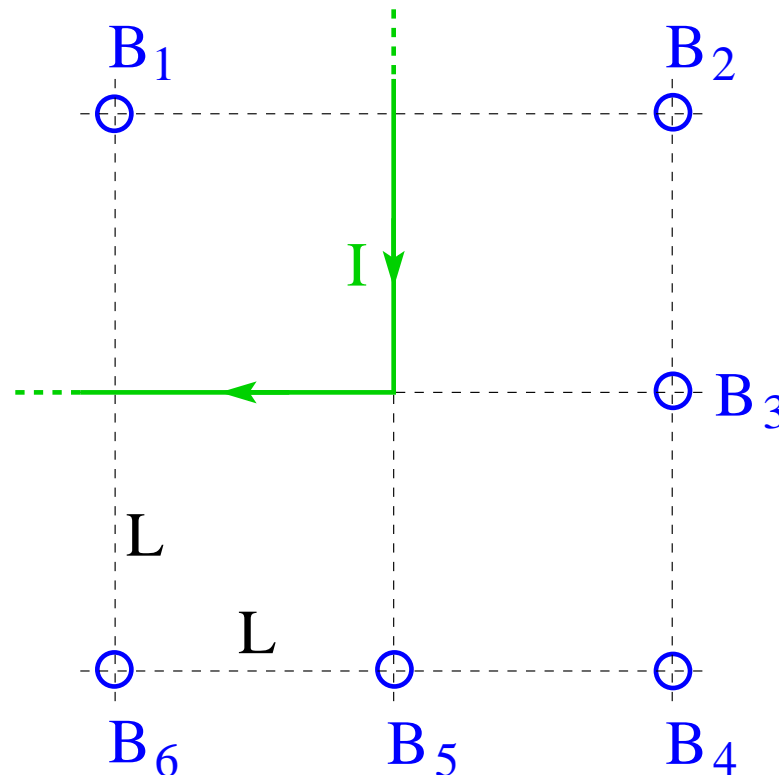- find magnitude and direction of the fields B_4, B_5, B_6 generated by I in (c).

(a) (b) (c)

$B_0 = 1T$

I

B_1

I

B_2

B_3

I

B_6

B_4

B_5

A current-carrying wire is bent into two semi-infinite straight segments at right angles.

(a) Find the direction $(\odot, \otimes)$ of the magnetic fields $B_1, \ldots, B_6$.

(b) Name the strongest and the weakest fields among them.

(c) Name all pairs of fields that have equal strength.

The currents I_1, I_2 in two long straight wires have equal magnitude and generate a magnetic field $\vec{B}$ as shown at three points in space.

- Find the directions $(\odot, \otimes)$ for I_1, I_2 in configurations (a) and (b).