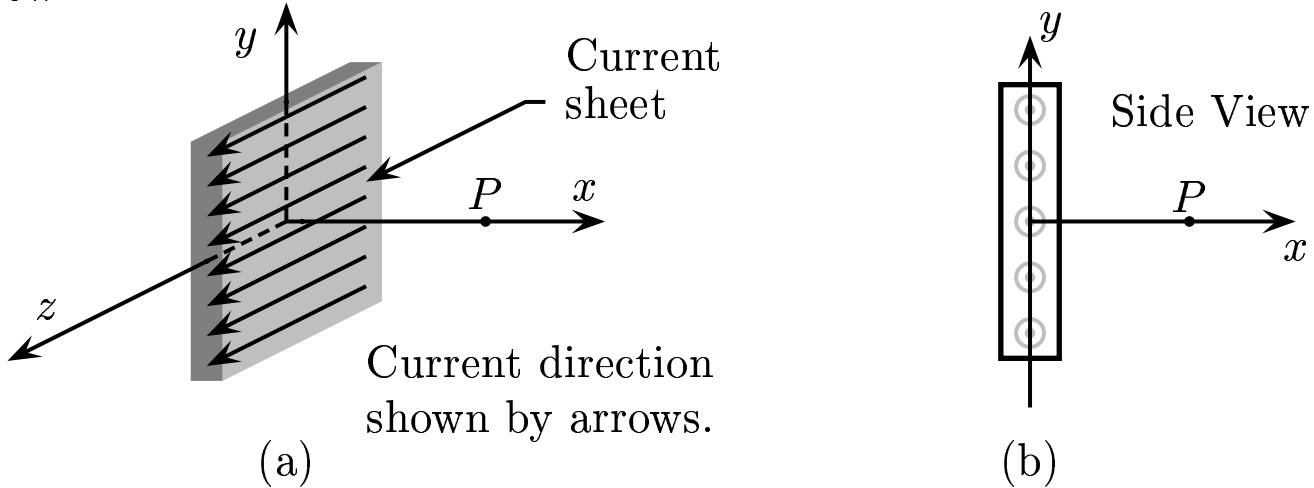


A sheet of current  $I$ , in the  $yz$ -plane at  $x = 0$ , is flowing along the positive  $z$ -direction. The current sheet has an infinite extent in both the  $y$ - and the  $z$ - directions. Figure (a) is a 3-dimensional view, and (b), a side view.



Find the direction of  $\vec{B}$  at  $P$  in Figure (b).

- A) The direction of  $\vec{B}$  is  $\rightarrow$ .
- B) The direction of  $\vec{B}$  is  $\leftarrow$ .
- C) The direction of  $\vec{B}$  is  $\uparrow$ .
- D) The direction of  $\vec{B}$  is  $\downarrow$ .

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Based on the right hand rule, in figure (a) at  $P$  the  $\vec{B}$  field vector is going upward and in figure (b), it is upward too. Answer **C**.