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 $\downarrow$. 
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.

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