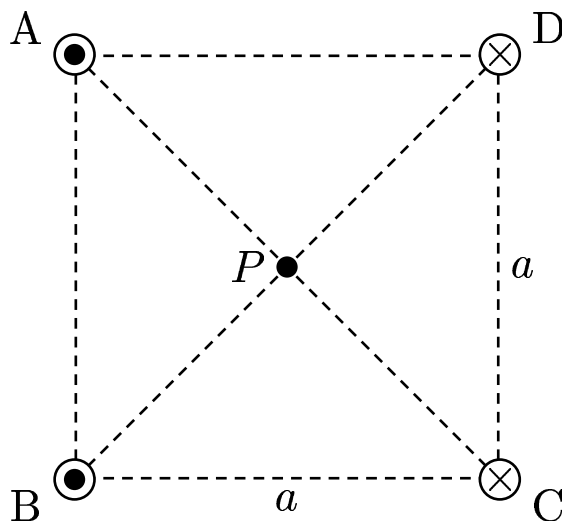
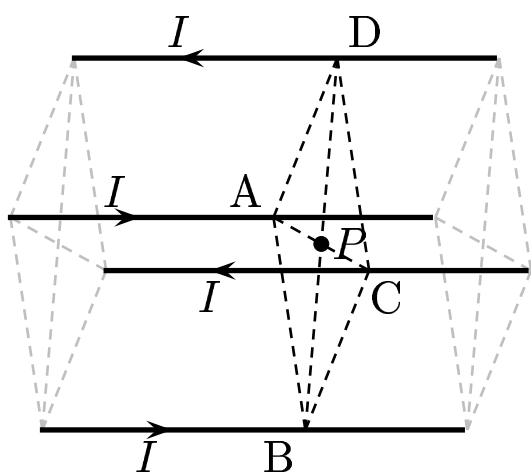


Consider 4 parallel wires shown in a 3d-view, and in a projected view from the right. The latter indicates that the wires are at four corners of a square, where each side has a length “ $a$ ”.



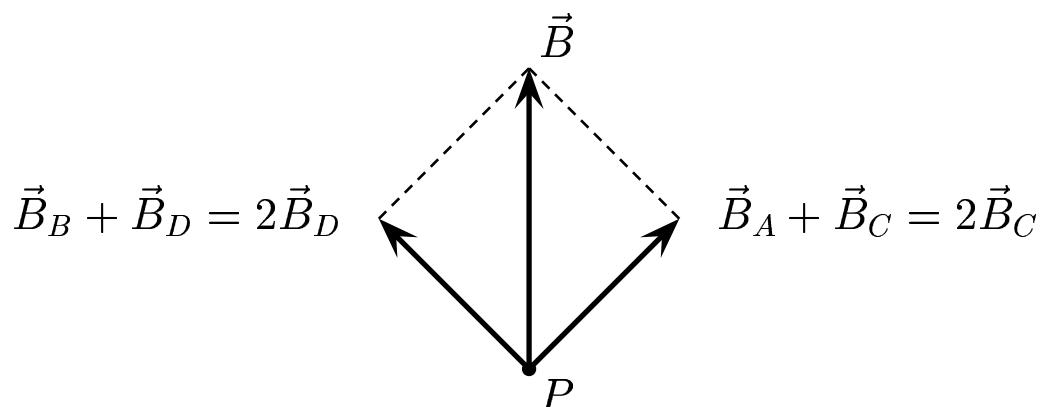
Using the figure on the right, sketch the field vectors due to the four wires at  $P$ , the center point, and the resultant vector  $\vec{B}$ .

- A) The direction of  $\vec{B}$  is up.  
 C) The direction of  $\vec{B}$  is right.

- B) The direction of  $\vec{B}$  is down.  
 D) The direction of  $\vec{B}$  is left.

The situation at  $P$  is shown below. The vector sum gives the resultant

field vector  $\vec{B}$ , which is pointing in the upward direction.



Answer A.

30.03-04 Field Due To 4 Parallel Wires 2006-9-14