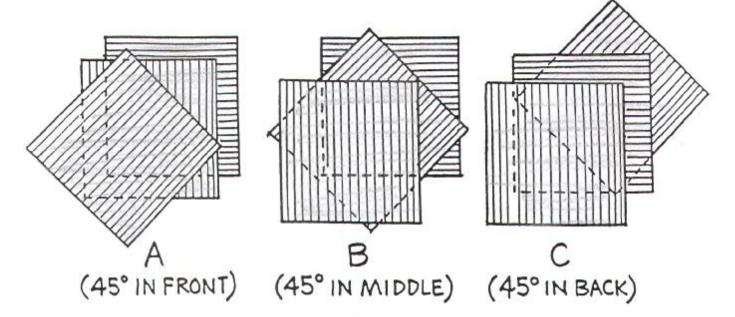
## Noneug exilence



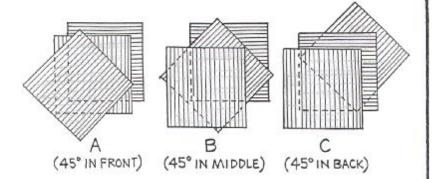
Three sets of Polaroids, one atop the other, are shown above. In each set the polarization axes of two Polaroids are at 90° to each other, and a third is at 45° to the two. Which set(s) will pass light where the three overlap?



CONCEPTUAL Physics

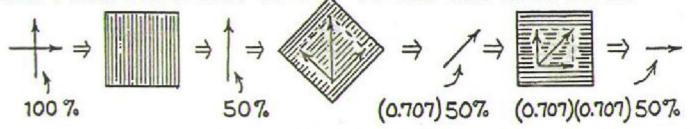
## Next-Time Question

Three sets of Polaroids, one atop the other, are shown above. In each set the polarization axes of two Polaroids are at 90° to each other, and a third is at 45° to the two. Which set(s) will pass light where the three overlap?



Answer: B

Only set B will pass light where all Polaroids overlap, for the axis of each Polaroid is not at 90° to the one next to it.



The vector diagram shows that half the light gets through the first Polaroid, shown by the vertical vector, and 0.707 of this gets through the second Polaroid because it is at 45° (not 90°!), and in turn 0.707 of this gets through the third. In set A all light is blocked by the back pair of Polaroids because they are at 90° to each other. Likewise with the front pair of Polaroids in C.