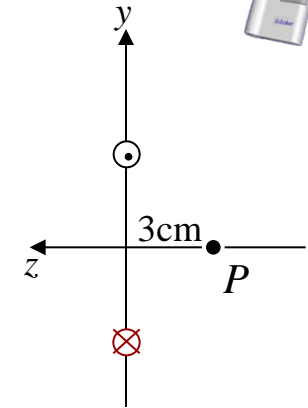
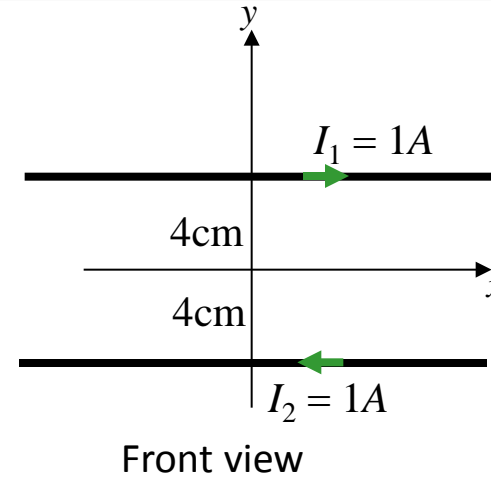


Calculation



Two parallel horizontal wires are located in the vertical (x,y) plane as shown. Each wire carries a current of $I = 1A$ flowing in the directions shown.

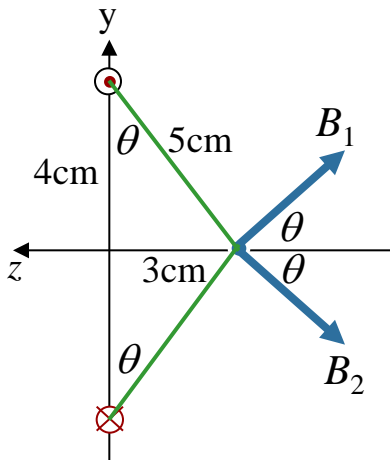


What is the B field at point P ?

$$B_{top} = 4 \times 10^{-6} T$$

What is the magnitude of B at P ? ($\mu_0 = 4\pi \times 10^{-7} T - m/A$)

- A) $3.2 \times 10^{-6} T$ B) $4.8 \times 10^{-6} T$ **C) $6.4 \times 10^{-6} T$** D) $8.0 \times 10^{-6} T$



$$B_{1x} = B_1 \cos \theta$$

$$B_{2x} = B_2 \cos \theta$$

$$\rightarrow B_x = 2B_1 \cos \theta = 2 \times 4 \times 10^{-6} \times \left(\frac{4}{5}\right) = 6.4 \times 10^{-6}$$