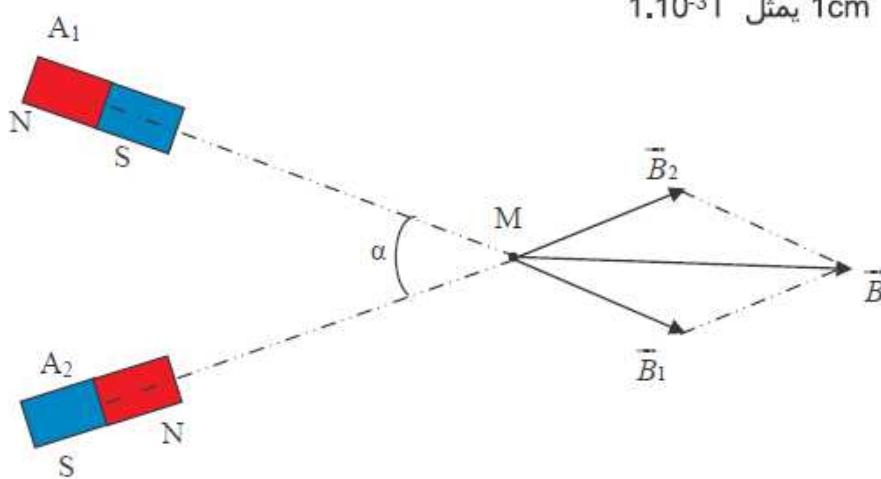


حل التمرين 06

1. سلم التمثيل 1.10^{-3} T يمثل 1cm 

$$\text{بياننا : } B = 4,4 \times 1.10^{-3} = 4,4 \cdot 10^{-3} \text{ T}$$

2. حسابيا :

$$B^2 = B_1^2 + B_2^2 + 2B_1B_2 \cos \alpha$$

$$B_1 = B_2 \Rightarrow B^2 = 2B_1^2 + 2B_1^2 \cos \alpha$$

$$\Rightarrow B = B_1 \sqrt{2(1 + \cos \alpha)}$$

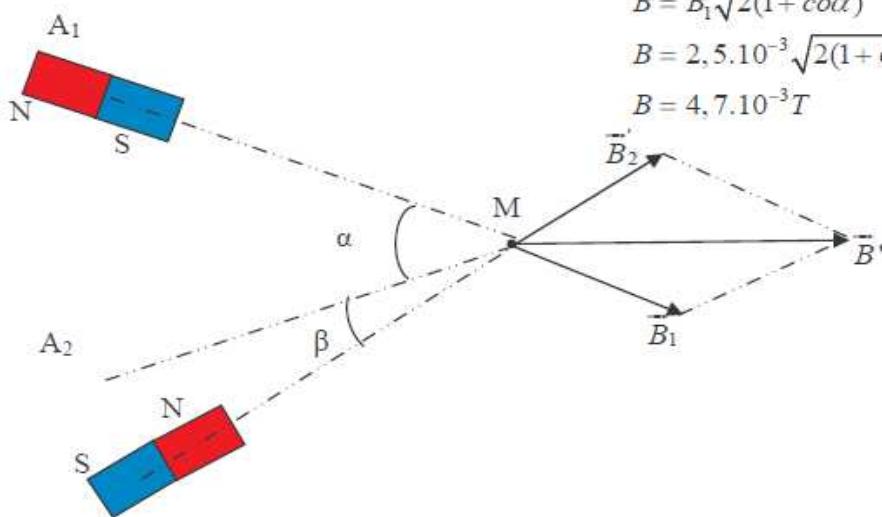
تطبيق عددي :

$$B = B_1 \sqrt{2(1 + \cos \alpha)}$$

$$B = 2,5 \cdot 10^{-3} \sqrt{2(1 + \cos 40)}$$

$$B = 4,7 \cdot 10^{-3} \text{ T}$$

4.



$$B'^2 = B_1'^2 + B_2'^2 + 2B_1'B_2' \cos(\alpha + \beta)$$

$$B_1 = B_2' \Rightarrow B'^2 = 2B_1^2 + 2B_1^2 \cos(\alpha + \beta)$$

$$\Rightarrow \cos(\alpha + \beta) = \frac{B'^2}{2B_1^2} - 1$$

تطبيق عددي :

$$\alpha + \beta = 60^\circ \Rightarrow \beta = 20^\circ$$