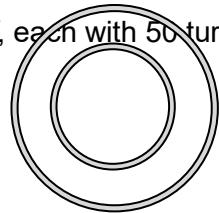




**23**

Two circular flat coils, X and Y, each with 50 turns, are arranged as shown in the diagram.



X has radius 0.060 m and carries a current of 1.5 A in the anti-clockwise direction. Y has radius 0.12 m and carries a current of 1.0 A in the clockwise direction.

What is the magnitude and direction of the resultant magnetic flux density at the centre of the coils?

**A**

$417\mu_o$  out of the page

**B**

$417\mu_o$  into the page

**C**

$833\mu_o$  out of the page

**D**

$833\mu_0$  into the page