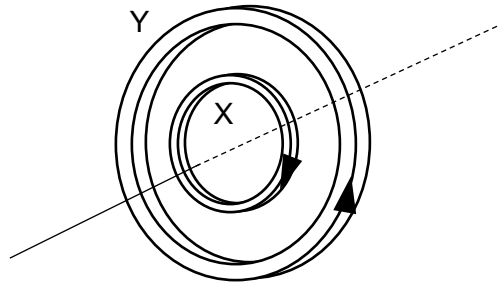


- 24** Two flat circular coils, X and Y, each with 50 turns, are arranged as shown in the diagram.



X has radius 0.050 m and carries a current of 2.0 A. Y has radius 0.10 m and carries a current 4.0 A in the opposite direction to X.

What is the magnitude of the total magnetic flux density at the centre of the coils?

- A** zero                      **B**  $2000\mu_0$                       **C**  $3000\mu_0$                       **D**  $4000\mu_0$