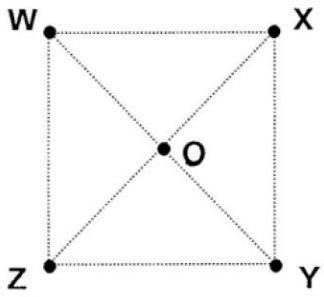
24 The diagram shows four long straight current-carrying conductors placed at the corners of a square at W, X, Y and Z. The current in each conductor has the same magnitude.



Point O is the intersection of the diagonals of the square. If the magnetic flux density at point O is zero, which of the following is true?

A The current in Y must be in the opposite direction as that in W and the current in X must be in the opposite direction as that in Z.

B The current in Y must be in the same direction as that in W and the current in X must be in the opposite direction as that in Z.

C The current in Y must be in the same direction as that in X and the current in W must be in the opposite direction as that in Z.

D The current in Y must be in the same direction as that in X and the current in W must be in the same direction as that in Z.