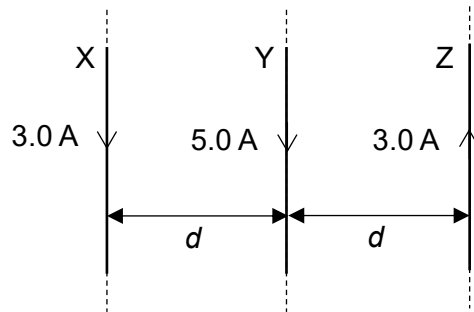


- 23** Three long, parallel wires X, Y and Z carry currents of 3.0 A, 5.0 A and 3.0 A respectively in the directions shown. X and Z are at distance  $d$  from Y. Wire Y exerts a force per unit length of  $8.0 \times 10^{-6} \text{ N m}^{-1}$  on wire Z.



What is the resultant force per unit length acting on wire X?

- A**  $5.6 \times 10^{-6} \text{ N m}^{-1}$  to the right
- B**  $5.6 \times 10^{-6} \text{ N m}^{-1}$  to the left
- C**  $8.0 \times 10^{-6} \text{ N m}^{-1}$  to the right
- D**  $8.0 \times 10^{-6} \text{ N m}^{-1}$  to the left

