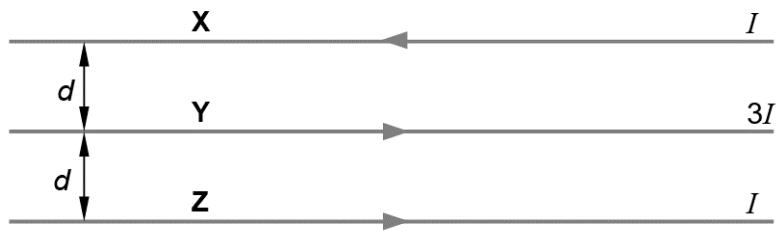


- 24 The diagram below shows three long, parallel, straight wires X, Y and Z placed in the same plane in a vacuum. Wires X and Z each carries a current of  $I$ , and wire Y carries a current of  $3I$ . Wire Y is halfway between wire X and wire Z.



The magnitude of the force per unit length acting between X and Z is  $F$ .

What is the direction and magnitude of the net force per unit length acting on Z?

	<u>Direction</u>	<u>Magnitude</u>
A	Towards Y	$F$
B	Towards Y	$5F$
C	Away from Y	$5F$
D	Away from Y	$7F$