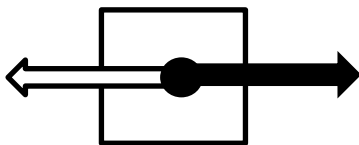


Balanced, unbalanced and resultant forces

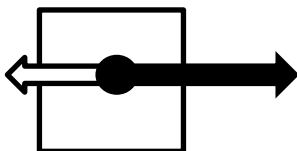
Forces are balanced if forces acting on an object are equal in size and opposite directions. The resultant force is the overall force acting on an object, once all the force vectors are added together. If there is a resultant force acting on an object it will accelerate in the direction of the resultant force.

For each of the following (1-3), draw an arrow to show the resultant force and describe how this will affect the motion of the block.

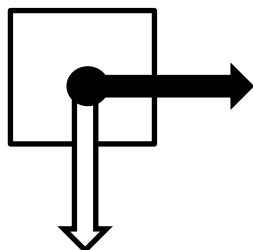
1)



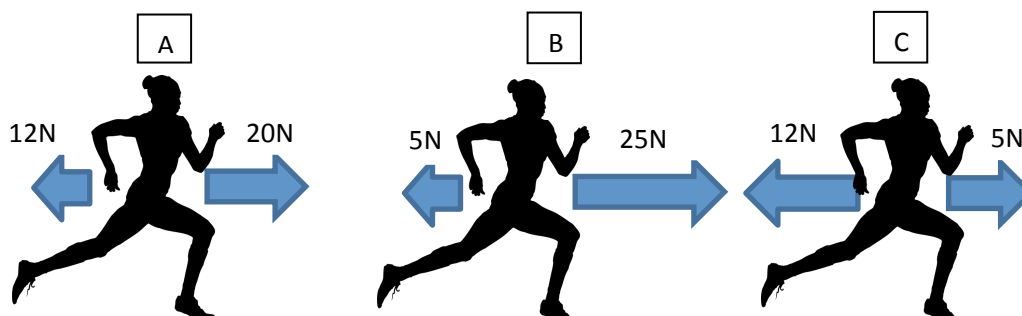
2)



3)



4) Work out the resultant force on each of the runners. What will the motion be like in each case?



Runner A has been running at 3m/s

Runner B has been running at 2m/s

Runner C has been running at 3.5m/s