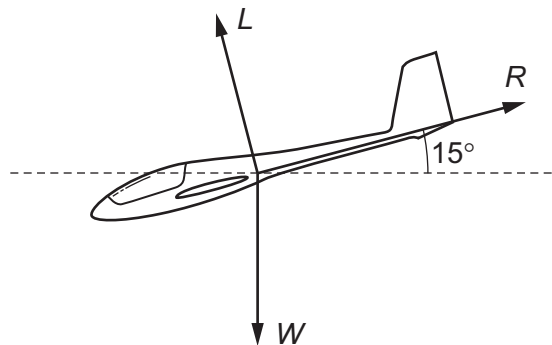


- 9 Two railway trucks of masses  $m$  and  $3m$  move towards each other in opposite directions with speeds  $2v$  and  $v$  respectively. These trucks collide and stick together.

What is the speed of the trucks after the collision?

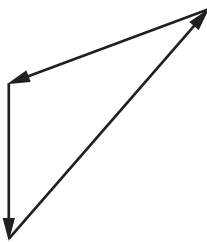
- A  $\frac{v}{4}$                       B  $\frac{v}{2}$                       C  $v$                       D  $\frac{5v}{4}$

- 10 A glider is descending at constant speed at an angle of  $15^\circ$  to the horizontal. The diagram shows the directions of the lift  $L$ , air resistance  $R$  and weight  $W$  acting on the glider.



Which vector triangle could represent the forces acting on the glider?

A



B



C



D



Space for working