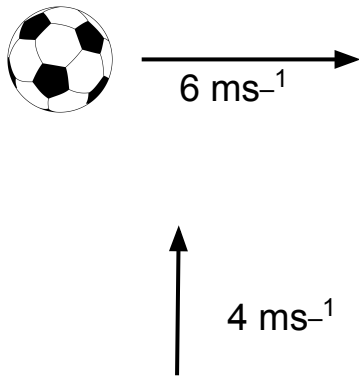


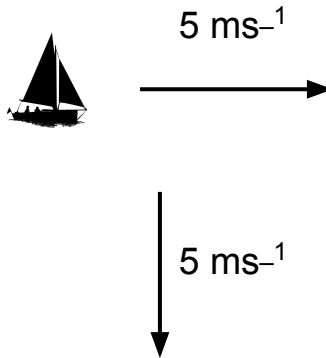
# Adding vectors together.

Find the resultant velocities in each of these situations. All velocities are measured relative to the ground.

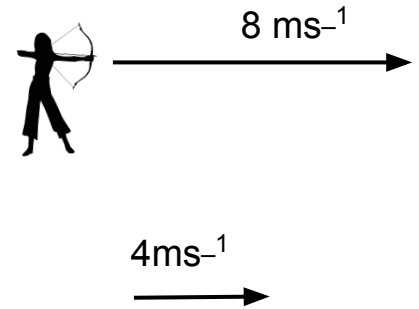
1.  
A ball with velocity  $6 \text{ ms}^{-1}$  to the East meets a wind  $4 \text{ ms}^{-1}$  coming from the South



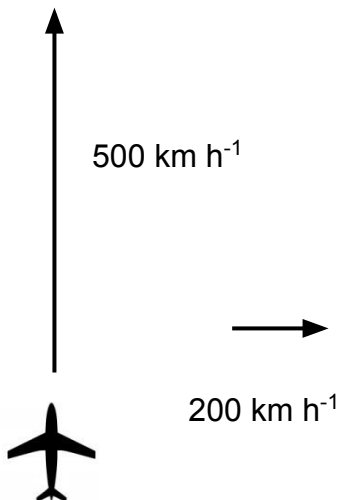
2.  
A yacht travelling at  $5 \text{ m s}^{-1}$  to the East. Current  $5 \text{ ms}^{-1}$  to the south



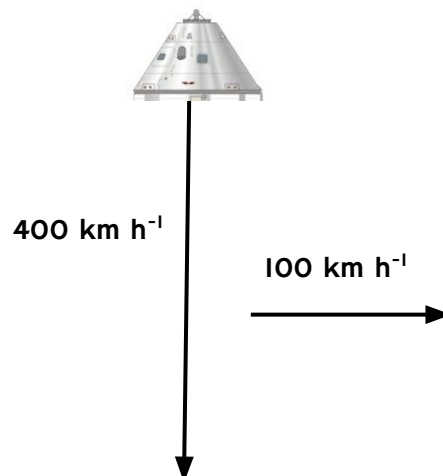
3.  
An arrow with velocity  $10 \text{ ms}^{-1}$  with a tail wind of  $4 \text{ ms}^{-1}$



4.  
A jet plane is flying with a velocity of 500 kilometres per hour due North. There is wind with a velocity of 200 kilometres coming from the East.



5.  
An Orion Space capsule comes through the atmosphere with a velocity of 400 km/h. A wind of velocity 100 km/h is blowing from the West.



6.  
Find the speed & bearing needed to keep this jet flying due East. It has a velocity 600 km/h East and there is a wind 300 km/h from the South.

