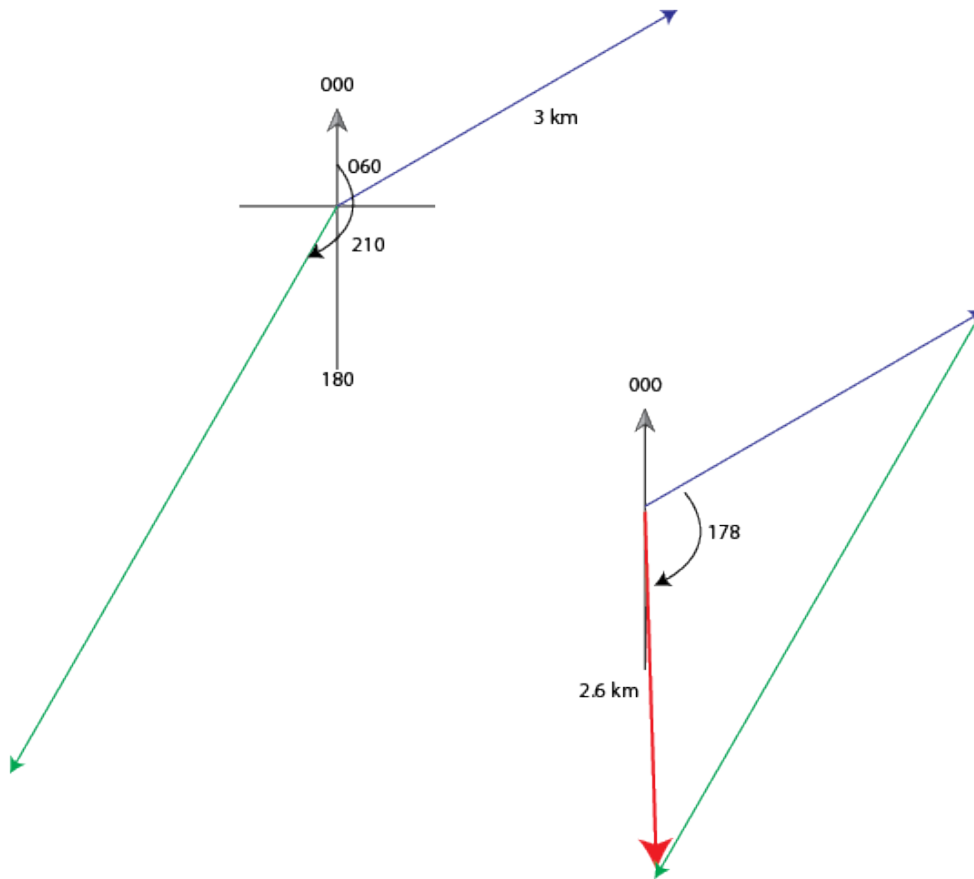


The same vector diagram applies to all three situations.

1. i) The boat's displacement is 2.6 km on a bearing of 178.

ii) The boat will have to travel 2.6 km on a bearing of 358 degrees. ( $178 + 180$ )



2. i) The drones resultant velocity is  $2.6 \text{ km hr}^{-1}$  on a bearing of 178.

ii) The drone will travel at  $2.6 \text{ km hr}^{-1}$  on a bearing of 178 degrees.

3. i) The resultant force on the block is 2.6 N at an angle 88 degrees below horizontal

ii) The acceleration of the block is  $1.3 \text{ ms}^{-2}$  at an angle of 88 degrees.