

An airplane is travelling at 400 km h^{-1} with a bearing of 048° .

- a) Find the velocity vector for this airplane expressed in component form, where North corresponds to the direction of the positive y -axis.
- b) After two hours the airplane changes course, increasing its speed to 530 km h^{-1} with a bearing of 062° . If the airplane flies for one hour along this new course, how far away is the airplane from its original position three hours earlier?