

VECTOR RESOLUTION

- 1.) A plane aims itself north but is blown off course. The plane flies at 322 km/hr at an angle of 56° east of north.
 - a.) How fast did the plane try to fly toward the north?
 - b.) How fast was the wind blowing?
 - c.) In which direction was the wind blowing?
- 2.) You're trying to swim straight to your buddy on the shore, but the current carries you off course with a displacement of 43m at an angle of 35° relative to the shore.
 - a.) How far would you have had to swim if you could have swum straight?
 - b.) How far down the beach did you wind up from your buddy?
- 3.) You're on a hike, and you need to get to your campsite, which is 1.7km from where you currently are at an angle of 65° west of south. However, there is a mountain range in the way. How far west do you have to walk? Then how far south do you have to walk?
- 4.) (Adapted from the textbook, #24) A submarine dives 110.0m at an angle of 10.0° below the horizontal. How deep did she dive?
- 5.) (Also from the textbook, #25) A person walks from school at 25.0° north of east for 0.5km. How far would her buddy have to walk to meet her if she went north first and then east?
- 6.) Review: A plane tries to fly from airport A to airport B, but there is a storm in the way, so it flies 180km west and then turns to fly 200km north. If it could have flown straight, what would its displacement (magnitude and direction) have been?