

Last Name: _____ First Name _____

Workshop time or section: _____ TA name or Room # _____

Please submit your homework on this sheet. If you need more space than is available, please attach additional sheets of paper.

1. Two piers, A and B , are located on a river: B is 1500 m downstream from A . Two friends must take round trips from pier A to pier B and return. One rows a boat at a constant speed of 4.00 km/h relative the water; the other walks on the shore at a constant speed of 4.00 km/h. The velocity of the river is 2.80 km/h in the direction from A to B . How much times does it take each person to make the round trip?

2. An airplane pilot wishes to fly due west. A wind of 80.0 km/h (about 50 mi/h) is blowing toward the south. (a) If the airspeed of the plane (its speed in still air) is 320 km/h (about 200 mi/h), in which direction should the pilot head? (b) What is the speed of the plane over the ground? Illustrate with a vector diagram.