

Math 223 Written Homework 1

1. Suppose the wind is blowing from the northwest at a speed of 50 km/h. A pilot is steering the plane due north at an airspeed (speed relative to the air) of 250 km/h. The true course is the direction of the sum of the two vectors, and the groundspeed is the magnitude of the resultant vector. Find the true course and the ground speed.
2. Find the value of x so that the angle between $\langle 2, 1, -1 \rangle$ and $\langle 1, x, 0 \rangle$ is 45° .