

## Physics 203: Quiz 2

September 17, 2012

Note: Please write down any formulae before plugging numbers into them.

1. A car's speedometer indicates 60mph. The driver decides to change lanes. Assume the lane change happens smoothly and the car moves 3m laterally (i.e. makes the lane change) in 5 seconds. For this period, what is the velocity of the car parallel to the road. (1mph $\sim$ 0.45m/s). Draw a picture.

2. A plane has to travel due west at a speed of 250m/s relative to the air. If there is a 25m/s wind blowing from south to north, in what direction w.r.t to due west must the plane head? Draw a picture.