

### **Physics 10154 - Quiz 3C**

A remote-controlled car starting from rest accelerates up a 4.50 meter long ramp that is inclined  $23.0^\circ$  above the horizontal with an acceleration of  $15.0 \text{ m/s}^2$ . Once it reaches the end of the ramp, it is in "free fall" for the remainder of its motion until it hits the ground again.

- a) What is the maximum height above ground level reached by the car?
- b) What is the magnitude and direction of the car's velocity at maximum height?