Paper Homework No. 04A (Spring 2018)

PHYS 203A: College Physics

Due date: Friday, 2018 Feb 23, 2.00pm, in class

(Name) (Signature)

Instructions

1. Your submission should include only this page. Other forms of submissions will not be accepted. Please print this page, and write your solution on the back side.
2. Show your thought process in detail and organize it clearly.
3. Make sure your answer has the correct units and the right number of significant digits.

Question

A student is skateboarding down a ramp that is 6.0 m long and inclined at 15° with respect to the horizontal. The initial speed of the skateboarder at the top of the ramp is 3.0 m/s. Neglect friction.

1. Identify the forces acting on the student. Choose a coordinate system such that the acceleration is along one of the axis. Draw a force diagram. That is, draw the force vectors.
2. Determine the acceleration of the student.
3. Find the speed of the student at the bottom of the ramp.