Physics 203: Quiz 1

September 10, 2012

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

1. What are the units of *(a)* displacement, and *(b)* acceleration? If you were to come up with a formula (equation) for velocity in terms of displacement and acceleration, what would it be, based purely on dimensional analysis? Recall that the dimensions (or units) on both sides of an equation have to be the same!

2. You're standing in an elevator that is about to move downwards. If you jump up **just before** it starts moving downwards, what acceleration do you *feel* when the elevator starts moving downwards at 1 m/s²? To another person standing in the elevator, what acceleration do you seem to have (when you're still in the air i.e.)?