Physics 211
Elementary Physics
Fall 2012

Instructor: Dr. Geoffrey Lovelace
Sections 1 & 70

Lecture 8 — 9/20/12

I. Relative velocity

A. Example: "Star Wars" bike chase showing different frames of reference

B. Calculating relative velocities: application of vector addition

II. Introduction to the laws of motion

A. Force = vector = something capable of giving an object acceleration

B. Net force = vector sum of all forces acting on an object

C. Mass = resistance to acceleration

C. Newton's first law: if net force is zero, velocity constant & acceleration zero

D. Newton's second law: a=Fnet/m

E. Example: projectile motion

III. Assignments

A. Exam #1: Tuesday (next class period)

B. Homework #3: due 11:59PM tonight

C. Homework #4: assigned today

D. Class participation: make a wish for what you would like on the formula sheet

E. Reading: continue chapter 4