

PH689-01 – Fall 2006  
Statistical methods for physics and astrophysics  
Assignment #3 – Thursday, August 31, 2006

1. Show that the variance of a binomial distribution equals  $N \cdot p \cdot q$ .
2. It is known that 7.3% of students of a given course fail, and 92.7% pass.
  - (a) What is the number of expected failures in a class of 32 students?
  - (b) What is the probability that 5 or more of the 32 students will fail the course?