

Math 262 Reading Guide

Section 2.7

NAME

Read Section 2.7 and answer the following questions. *Hand in this worksheet at the the next class.*

1. What is the **k th moment** of a random variable? How is it different from the **k th moment about the mean**?
2. How are the mean, variance, and skewness coefficient of a random variable related to the moments of the random variable?
3. What is the definition of the **moment generating function (mgf)** of a discrete random variable?
4. What is the moment-generating function of a Bernoulli random variable? (*Hint*: see Example 2.46)
5. What does the MGF Uniqueness Theorem tell us?
6. How can $E(X^r)$ be obtained from the moment-generating function of X ?