Math 262 Reading Guide

Section 3.3 NAME

Read Section 3.3 and answer the following questions. *Hand in this worksheet at the next class.*

1. What is the definition of a **normal distribution**?

2. What is the definition of a **standard normal distribution**? What does $\Phi(z)$ denote?

3. How is Table A.3 used in Example 3.19? Look at Table A.3 (pages 567–568) and make sure you understand how it gives normal probabilities.

4. What does it mean to "standardize" a normal random variable?

5. How is standardizing used to compute a probability in Example 3.21? (Note that the two shaded regions in Figure 3.20 have the same area.)

6. If $X \sim N(\mu, \sigma)$, what is the mgf of X?