

Homework 18: The Standard Normal Distribution

1. Use a standard normal table to calculate $\int_{-.44}^{1.33} e^{-z^2/2} dz$.
2. Let Z be a standard normal random variable. Find the following probabilities:
 - (a) $P(0 \leq Z \leq 2.07)$
 - (b) $P(Z > -1.06)$
 - (c) $P(Z \leq -2.33)$
 - (d) $P(-.33 \leq Z \leq 1.2)$
3. Assume that Z is a standard normal random variable. For what values of z are the following statements true?
 - (a) $P(Z \leq z) = 0.33$
 - (b) $P(-1.00 \leq Z \leq z) = 0.564$
 - (c) $P(-z \leq Z \leq z) = 0.8$