

Warm-up Problems - April , 2006

1. Find the probabilities for the standard normal distribution.

(a) $P(0 \leq X \leq 2.26) =$

(b) $P(X \leq 2.26) =$

(c) $P(X \geq 2.26) =$

(d) $P(-2.26 \leq X \leq 2.26) =$

(e) $P(1.08 \leq X \leq 2.26) =$

(f) $P(X \leq -2.26) =$

Lecture Problems

2. Convert the X -probabilities into Z -probabilities.

Find the probabilities for the normal distribution indicated.

(a) $\mu = 2.5, \sigma = 3$

$P(X \geq 4) =$

(b) $\mu = -4, \sigma = 2.1$

$P(-3.5 \leq X \leq -3) =$

(c) $\mu = 6.2, \sigma = .12$

$P(X \leq 5.95) =$

(d) $\mu = 6.2, \sigma = 2.1$

$P(X \leq 5.95) =$

3. Course scores are normally distributed with $\mu = 65$ and $\sigma = 5$.

(a) Find the proportion of students who scores above 70.

(b) Find the proportion of students who scored above 80.

(c) If the top 10% of the class receive A's, find the lowest score to receive an A.

(d) If the top 40% of the class receive A's and B's, find the lowest score to receive a B.

Area Under the Standard Normal Curve ($\mu = 0, \sigma = 1$) From 0 to z

[illegible]