EGG 102 – Introduction to Engineering Design (Spring 2002)
In Class Exercise #7

Name _____

Statistics

Based on data from 20 people, the average (mean) foot length is 250 millimeters and the standard deviation is 50 millimeters. The 2.5, 5, 50, 95, and 97.5 percentiles are 125, 175, 240, 320, 325 millimeters, respectively. You need to design a special boot that you can place your feet in and massages it while you sit at your desk.

1. Based on statistics (i.e., the mean and standard deviation), what would be the LARGEST foot size that you would design for based on a criteria that would satisfy 95% of the people?

2. Based on percentiles, what would be the SMALLEST foot size that you would design for based on a criteria that would satisfy 95% of the people?

3. What is the median value?