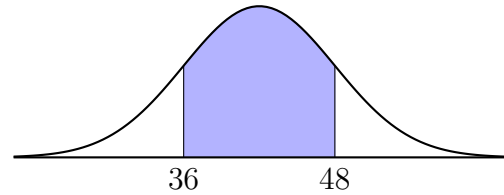**Statistics Homework Problems**

1. In the normal distribution below, 68% of the data falls within the shaded region. Find the mean μ and the standard deviation σ.

36   48

2. Explain why a distribution with median $M = 64$, mean $\mu = 53$, and standard deviation $\sigma = 9$ cannot be a normal distribution.

3. The systolic blood pressure for men is roughly 125 (millimeters of mercury) with a standard deviation of $\sigma = 15$. Find the z-values for the following blood pressures.

   (a) 110

   (b) 150

   (c) 100

4. At a large state university, the probability of a student graduating after 4 years is 60%. If the entering freshman class had 9,600 students, then what is the probability that more than 5,856 of those students will graduate on time?