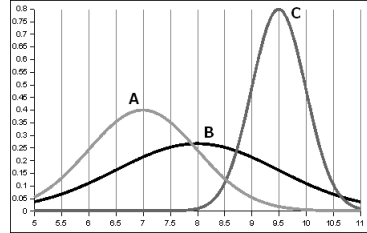**Stat 171 - Worksheet for Section 5.1**

**Name:** _____
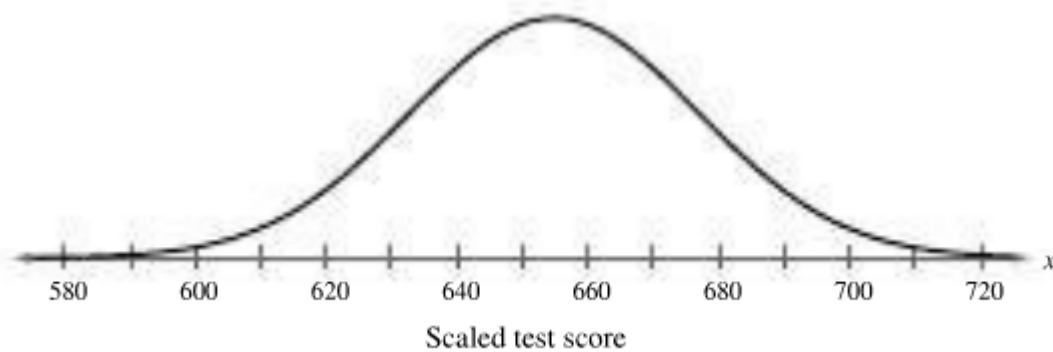
1. Consider the normal curves shown at the right. Which normal curve has the greatest mean? Which Normal curve has the greatest standard deviation?

   (a) Find the location of the line of symmetry of each curve. Make a conclusion about which mean is greatest.

   (b) Determine which normal curve is more spread out. Make a conclusion about which standard deviation is greatest.



2. The scaled test scores for the New York State Grade 8 English Language Arts Test are normally distributed. The normal curve shown below represents this distribution. What is the man test score? Estimate the standard deviation of this normal distribution.

   (a) Find the line of symmetry and identify the mean.

   (b) Estimate the inflection points and identify the standard deviation.



Scaled test score

3. Using Table 4 in Appendix B

   (a) Find the cumulative area that corresponds to a z-score of -2.19.

   (b) Find the cumulative area that corresponds to a z-score of 2.17.

4. Find the area under the standard normal curve to the right of $z = -2.16$.

5. Find the area under the standard normal curve between $z = -1.35$ and $z = -2.16$.