Name **MAT 340-Statistics for Behavioral Science**
Date **Assignment #7**

1. Use the following to answer questions (a)-(c):

The daily sales at a convenience store produce a distribution that is approximately normal with a mean of 1220 and a standard deviation of 130.

a. The probability that the sales on a given day at this store are more than $1,405, rounded to four decimal places, is:

b. The probability that the sales on a given day at this store are less than $1,305, rounded to four decimal places, is:

c. The probability that the sales on a given day at this store are between $1,200 and $1,300, rounded to four decimal places, is:

2. Use the following to answer questions (a)-(c):

The GMAT scores of all examinees who took that test this year produce a distribution that is approximately normal with a mean of 420 and a standard deviation of 32.

a. The probability that the score of a randomly selected examinee is between 400 and 480, rounded to four decimal places, is:

b. The probability that the score of a randomly selected examinee is less than 370, rounded to four decimal places, is:

c. The probability that the score of a randomly selected examinee is more than 530, rounded to four decimal places, is:

3. For the standard normal distribution, the area between $z = 0$ and $z = 1.70$, rounded to four decimal places, is:

4. For the standard normal distribution, the area to the right of $z = 0.53$, rounded to four decimal places, is:

5. Let x be a continuous random variable that follows a normal distribution with a mean of 207 and a standard deviation of 42.

   Find the value of x so that the area under the normal curve between μ and x is approximately 0.4996 and the value of x is greater than μ. Round your answer to two decimal places.