

Name
Date

MAT 330-Introduction to Statistics
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:

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- 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.