Homework.

Below please note some examples for the second exam.
Good luck.

<Q> Glucose levels of males are normally distributed with a mean of 170 mg/dL and a standard deviation of 8 mg/dL , Which of the following statements is true about this population:

<C+> 95% of the population have Glucose levels between 154 mg/dL and 186 mg/dL

<C> 80% of the population have Glucose levels between 154 mg/dL and 186 mg/dL

<C> 85% of the population have Glucose levels between 154 mg/dL and 186 mg/dL

<C> 97% of the population have Glucose levels between 154 mg/dL and 186 mg/dL

<C> 90% of the population have Glucose levels between 154 mg/dL and 186 mg/dL

<C> Population C.I. cannot be estimated from the provided data.

<Q> Glucose levels of males are normally distributed with a mean of 170 mg/dL and a standard deviation of 8 mg/dL.

What percentage of males will have a blood sugar levels between 162mg/dL and 178 mg/dL?

<C+> 68%

<C> 50%

<C> 30%

<C> 97%

<C> 95%

<Q> Glucose levels of males are normally distributed with a mean of 170 mg/dL and a standard deviation of 8 mg/dL. What is the probability of selecting a male who has blood sugar level of 170 mg/dL or more?

<C+> 0.5000

<C> 0.6000

<C> 0.2734

<C> 0.2500

<C> 0.2266

<Q> If the sample mean of a data set is 15 and the sample standard deviation is 9.

What percent of the data would you expect to fall between 6 and 24, assuming that the data distribution is normal?

<C+> 68 percent

<C> 81.5 percent

<C> 95 percent

<C> 99.7 percent

<Q> If an observation has 2.00 standard deviations below the mean (m), then the z score is:

<C> 2.00

<C+> - 2.00

<C> 0.00

<C> 2.00 + 1.96

<C> 2.00 + 1.96 m

<C> 2.00 + m

<Q> If an observation has 2 standard deviations above the mean (m), then the z score is:

<C+> 2.00

<C> - 2.00

<C> 0.00

<C> 2.00 + 1.96

<C> 2.00 + 1.96 m

<C> 2.00 + m

<Q> Pulse rates of adult men are normally distributed with a mean of 70 and a standard deviation of 8.

Which choice correctly describes how to find the percentage of men that have:

a pulse rate more than 78?

<C> Find the area to the left of z = 1 under a standard normal curve.

<C> Find the area between z = −1 and z = 1 under a standard normal curve.

<C+> Find the area to the right of z =1 under a standard normal curve.

<C> Find the area to the left of z = 2.00 under a standard normal curve.

<C> Find the area to the left of z = −2.00 under a standard normal curve.

<Q> Heart Rates of a group of patients follow a normal distribution with a mean of 65 beats/min and a standard deviation of 12 beats/min.

Approximately what percentage of the patients have a heart rate below 50 beats/min?

Note that:

The cumulative probability for z= 1.25 = 0.8944

The cumulative probability for z= - 1.25 = 0.1056

<C+> 11%

<C> 89%

<C> 15%

<C> 18%

<C> 39%

<C> 50%

<Q> Heart Rates of a group of patients follow a normal distribution with a mean of 65 beats/min and a standard deviation of 12 beats/min. Approximately what percentage of the patients have a heart rate above 50 beats/min?

Note that:

The cumulative normal probability for z= 1.25 = 0.8944

The cumulative normal probability for z= - 1.25 = 0.1056

<C> 11%

<C+> 89%

<C> 15%

<C> 18%

<C> 39%

<C> 50%

<Q> Pulse rates of adult men are normally distributed with a mean of 70 and a standard deviation of 8. For a pulse rate of 78, we found that the z score= 1.

The area under the normal distribution curve for *z* = 1 was found to be 0.84.

Which of the following statements is correct?

<C+> 84% of adult men have a pulse rate of 78 or less

<C> 26% of adult men have a pulse rate of 78 or less

<C> 84% of adult men have a pulse rate of 78 or more

<C> 22% of adult men have a pulse rate of 78 or more

<C> None of the answers are correct

<Q> Let x be the random variable that represents the systolic blood pressure of a certain patients in a hospital. x has a mean = 90 and a standard deviation = 10. We have to find the probability that x is higher than 100 or P(x > 100).

For x = 100, z = 1, and the area under the curve for z=1 was found to be 0.84.

Which of the following conclusions is correct?

<C+> The probability that a patients selected at a random has a systolic blood pressure greater than 100 is equal to 0.1587

<C> The probability that a patients selected at a random has a systolic blood pressure less than 100 is equal to 0.84

<C> The probability that a patients selected at a random has a systolic blood pressure greater than 100 is equal to 84%

<C> The probability that a patients selected at a random has a systolic blood pressure = 100 is equal to 0.1587

<Q> Birthweights at a certain hospital are normally distributed with mean = 112 oz and standard deviation = 21 oz.

What is the z-score for an infant with birthweight = 154 oz.?

<C+> 2

<C> 21

<C> -2

<C> 154

<Q> The daily water usage per person in Amman is normally distributed with a mean of 20 gallons and a standard deviation of 5 gallons.

About 68% of the daily water usage per person in Amman will be between what two values?

<C+> 15 and 25 gallons.

<C> 15 and 35 gallons.

<C> 25 and 35 gallons.

<C> 5 and 20 gallons.

<C> 68% and 95%