Practice

- Suppose heights of children in a youth baseball league are normally distributed with a mean of 48 inches and a standard deviation of 2 inches. Estimate the percentage of children in the league that are shorter than 45 inches.

6.7%

- Suppose heights of children in a youth baseball league are normally distributed with a mean of 48 inches and a standard deviation of 2 inches. Estimate the percentage of children in the league that are taller than 44 inches.

97.7%

- Suppose heights of children in a youth baseball league are normally distributed with a mean of 48 inches and a standard deviation of 2 inches. Estimate the percentage of children in the league that are between 43 and 45 inches.

6.1%

- Which of the following is NOT a requirement to model with the binomial distribution?

A predetermined number of trials

A continuous random variable

A constant probability of success between trials

Exactly two possible states for the random variable

Practice

- Which of the following COULD be modeled using the binomial distribution?

The probability of getting exactly 3 questions correct when randomly guessing on a 10 question true/false test.

- Suppose that a sample of size 12 is randomly chosen from a batch of size 800 that is known to be 5% defective. What is the probability that there is exactly one defective item in your sample?

.341

- Which of the following is true about variation:

Common cause variation can exist in a process that is in statistical control

- The impact of temperature fluctuations within the plant on the variability in a process would be characterized as what type of variation?

Common cause

- A control chart signals that the mean of your process has increased and after investigating it is determined that an operator incorrectly adjusted the equipment. The variation due to the operator's incorrect adjustment is an example of what type of variation?

Special cause