**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 6 Quiz

Answer the following questions. **Show your work!**

1. Let the random variable X represent the height of elephants. Suppose this follows a normal distribution with mean = 75 ft and standard deviation = 18 ft. I am going to randomly select an elephant from this population.
2. What is the probability X is less than 79 ft?

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1. What is the value for the 25th percentile of heights?

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1. Using the elephant population information from problem (1), I am going to take a sample of size *n = 20* elephants.
2. Find the parameters of the distribution of sample mean heights, .
3. What is the probability a sample mean height is greater than 85 ft?

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1. What is the probability a sample mean height is between 63 ft and 80 ft?

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1. Suppose 55% of CSCC students of own a Mac laptop (*p = 0.55*) and I am going to take a sample *n = 50* students.
2. Find the parameters of the distribution of sample proportion of students who own Macs, .
3. What is the sample proportion for the top 25%?

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