

Directions: For each problem, show the necessary work and indicate clearly your answer. Simplify your answers. (Note: This supplement consists of 2 pages.)

For problems 1 – 3, there are 30,000 students enrolled at City University.

1. A simple random sample of **400** City University students was taken at the end of the spring semester. Of the students in the sample, 134 said that they plan to do volunteer work over the summer.

a) Find a **90% confidence interval** for the percentage of **all** enrolled students who plan to do volunteer work over the summer.

b) Find a **95% confidence interval** for the percentage of **all** enrolled students who plan to do volunteer work over the summer.

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2. A simple random sample of **1600** City University students was taken at the end of the spring semester. Of the students in the sample, 536 (33.5%) said that they plan to do volunteer work over the summer. Based on this sample, find a **95% confidence interval** for the percentage of **all** enrolled students who plan to do volunteer work over the summer.

3. 75% of **all** City University students live within the city limits. A simple random sample of **225** City University students is taken. Use a normal curve to estimate the probability that more than 79% of the students in the sample live within the city limits.