Quiz 10.2B AP Statistics Name:

About 42,000 high school students took the AP Statistics exam in 2001. The free-response section of the exam consisted of five open-ended problems and an investigative task. Each free-response question is scored on a 0 to 4 scale (with 4 being the best). A random sample of 25 student papers yielded the following scores on one of the free-response questions:

1 0 1 0 0 0 3 1 1 1 0 2 0 0 2 1 1 0 2 4 1 0 2 0 3

1. Is a sample of 25 papers large enough to provide a good estimate of the mean score of all 42,000 students on this exam problem? Justify your answer.

2. Do you think the population of scores on this question is Normally distributed? Explain why or why not.

3. Construct and interpret a 95% confidence interval for the mean score on this exam question. Follow the Inference Toolbox. Be sure to explain why it's okay to calculate the interval in light of your answer to Question 2.