1a. A data set of 500 scores had 68% of the scores within one standard deviation of the mean. Could we assume the data could best be modeled by the normal distribution? explain your answer

b. Two samples of size 50 and 70 are taken from the same uniform distribution. Which sample will have the larger 95% confidence interval? explain your answer.

c. Consider a normal distribution where the height X of a single randomly chosen two year old varies with mean 76cm and standard deviation 6.25cm. A medical study investigated the height of 200 two year olds. What would be the mean and standard deviation for this distribution.

2a. A teacher from a high school in remote Western Australia did a survey of the distances that teachers travelled to get to school. Analysis of bests results found that the mean distance travelled was 21km with a standard deviation of 15km. The range of distances traveled was 80km.

Determine whether a normal distribution would be appropriate to model the data collected by this teacher. Justify your decision.