AP Statistics
Homework of the Week 7
Show all work and justify your answers
Each question is worth 3 points

1.

A graph (not shown) of the selling prices of homes in a certain city for the month of April reveals that the distribution is skewed to the left. Which of the following statements is the most reasonable conclusion about the selling prices based on the graph?

(A) The mean is greater than the median.

(B) The median is the average of the first quartile and the third quartile.

(C) There are fewer selling prices between the first quartile and the median than there are between the median and the third quartile.

(D) There are more selling prices that are less than the mean than selling prices that are greater than the mean.

(E) The value of maximum minus third quartile is less than the value of first quartile minus minimum.

2.

A distribution of scores is approximately normal with a mean of 78 and a standard deviation of 8.6. Which of the following equations can be used to find the score x above which 33 percent of the scores fall?

(A) $0.44 = \dfrac{x - 78}{(8.6)^2}$

(B) $0.67 = \dfrac{x - 78}{(8.6)^2}$

(C) $0.33 = \dfrac{x - 78}{8.6}$

(D) $0.44 = \dfrac{x - 78}{8.6}$

(E) $0.67 = \dfrac{x - 78}{}$

Free Response
14 points

Create a question with a real world context that gives the mean, standard deviation and a value in the data that is approximately normal.

a. Calculate and interpret the z score of the value. (4 pts)

b. Find the percentile of the value. (4 pts)

c. Find the approximate minimum value in the data. (5 pts)