GRADE 12 ESSENTIAL
UNIT C –STATISTICS
GRAPHING MEAN, MEDIAN, MODE, RANGE

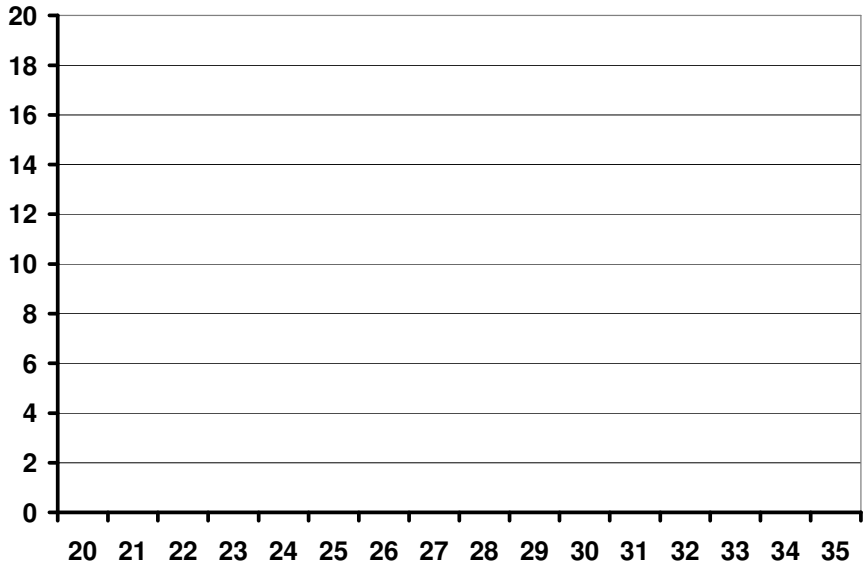
Name: _____
Date: _____

Show Work. **Round decimal answers to nearest 0.01**

Here is a sample of the duration of your bus trips to school for three months. (60 weekdays). You recorded the times in minutes as follows:

20, 21, 28, 26, 22, 26, 22, 24, 22, 22, 22, 23, 24, 23, 23, 23, 23, 27, 23, 23, 23, 23, 23, 25, 24, 24, 24, 24, 24, 24, 24, 24, 22, 24, 35, 24, 24, 23, 25, 25, 25, 25, 25, 25, 25, 25, 25, 25, 24, 25, 26, 26, 21, 26, 26, 22, 23, 27, 21, 24

a. **Neatly** graph and label the histogram. Properly label it. (A frequency data table would be useful)



b. Record the Mean, Median, Mode, and Range of the data. (from Frequency Data Table)

Mean:	Median:
Mode:	Range:

c. Which datum is an outlier? Why do think it is so far away from the main 'cluster' and central value?

d. is the median very different from the mean in this sample?

e. is it correct to say that for half the bus rides your bus took more than 26 minutes? Why?

f. if the outlier was not counted what would the mean and the median be? Would they still be as close as before? Explain the size of the differences calculated with the outlier and without the outlier.

g. Do you think if you were to record your bus trip durations for a different three month period that the statistics would be exactly the same, close, or wildly different? Explain

h. given this original data, what is the chance (probability) that the next bus ride you take takes less than 23 minutes?

Frequency Data Table (to calculate statistics of large samples)				
x Value of variable being measured	Tally ticks	**f** frequency each value happens [count]	**f*x** *f times x*	
				Mode; most frequent x: _____
				Mean: $\frac{\Sigma fx}{n} =$
				Median Halfway up the data; in between two values if n is even. _____
		sum: n = _____	sum Σ*all the f * x's* _____	