

GRADE 12 APPLIED
UNIT D(2) –STATISTICS
GRAPHING MEAN, MEDIAN, MODE, RANGE

Name: _____

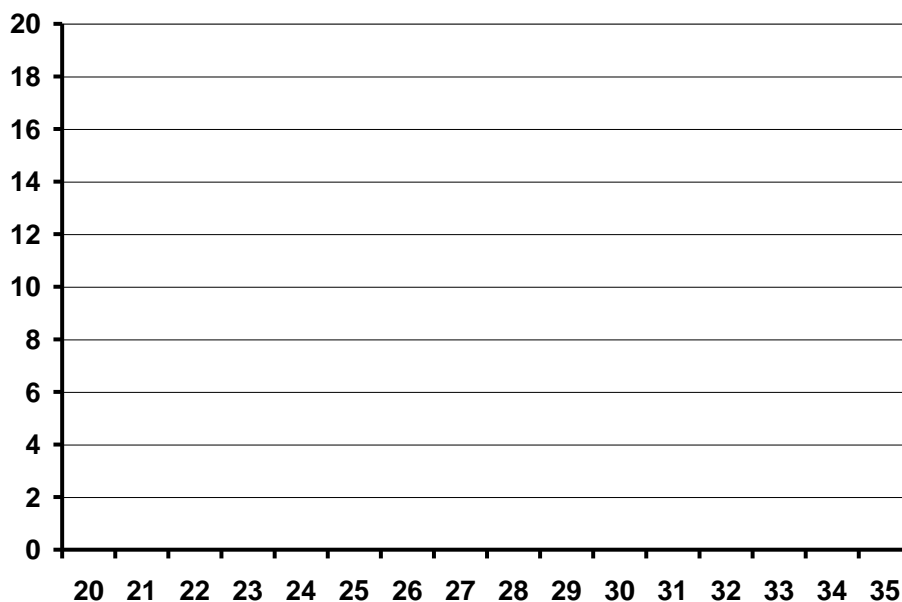
Date: _____

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, 25,
 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. **Complete the frequency data table attached. Neatly graph and label the histogram. Properly label it.**



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

Mean:	Median:
Mode:	Range:

- c. State which datum is the outlier. Explain what situation might have generated the outlier to be so far away from the mean?
- d. determine the value of the difference between the mean and the median duration?
- 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? 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 (if nec)	f frequency each x value happens [count]	Cumulative frequency	f*x <i>f times x</i>	
					Mode; most frequent x: _____
					Mean: $\frac{\sum fx}{n} =$
					Median Halfway up the data; in between two values if n is even. _____
		sum: n = _____		sum <i>\sum all the $f*x$'s</i> = _____	