

M118 SECTION 11.1 – Graphing Quantitative Data

- 1) Quantitative Data - observations that are measured on a numerical scale. (AGES, WEIGHTS, BOND YIELDS, TEST SCORES, ETC.)

The weekly record of reported accidents in a large auto assembly plant in a random sample of 35 weeks from the past 10 years is listed below:

34	33	36	35	37	31	37
39	34	35	37	35	32	35
33	35	32	34	32	32	39
34	31	35	33	31	38	34
36	34	37	34	36	39	34

- a) Construct a frequency and relative frequency table using class intervals of width 2 and starting at 29.5.

Data Range - $39 - 31 = 8$

HISTOGRAMS: Most common graphical representation of frequency distribution

Turn the frequency table $90^\circ \rightarrow$ looks like a bar graph

Histograms have NO space between bars

Class intervals - horizontal axis

Frequencies - vertical axis

- b) Construct a histogram.

FREQUENCY POLYGONS: A broken line graph whose successive midpoints of tops of bars in a histogram are joined by straight lines. If the amount of data is very large and we substantially increase the number of classes, the frequency polygon will become a smooth curve called a frequency curve.)

c) Construct a frequency polygon. (Use the histogram from above)

d) Construct a cumulative frequency and relative cumulative frequency table. (Use the table from part a)

What is the probability that a week chosen at random will have reported accidents between 33.5 to 37.5? _____

e) Form a cumulative frequency polygon or OGIVE.