

1) The following sample data for completing the design of a house are incomplete:

Days	Number of Houses	Relative Frequency	Cumulative Frequency
(5,6]			
(6,7]	19		27
(7,8]		0.35	
(8,9]	15	0.15	
(9,10]			91
(10,11]			
Totals	100	1.00	

- a) Complete the frequency table.
  - b) Draw a frequency histogram and interpret it.
  - c) Find the mean and the standard deviation of the number of days required to complete the design.
- 2) The following values represent the cycle times observed during a repetitive factory task, in minutes:

4.5    3.2    3.8    4.7    5.1    3.3    4.2    2.8    3.5    4.4  
 3.7    2.9    2.8    3.2    3.5    4.3    3.0    4.1    3.2    4.0

- a) Draw a stem and leaf plot.
  - b) Find the mean, the median, the mode and the standard deviation of the cycle times.
  - c) Do the data satisfy the empirical rule? Explain
  - d) Draw a box plot and interpret it.
- 3) The resistance of a new resistor was measured at various temperatures as shown below:

Temperature (°C)	10	15	20	25	30	35
Resistance (ohms)	38.6	40.1	41.9	44.8	45.6	47.7

- a) Plot the data, and explain the relationship how temperature affects resistance.
- b) Find the regression of resistance on temperature.
- c) What value of resistance should be estimated when the temperature is 24°C?
- d) Find the correlation coefficient and interpret it.