

1. Determine the mean, median and mode of the following data. Show your work. [3]

2, 10, 7, 4, 2, 9, 8, 12

2, 2, 4, 7, 8, 9, 10, 12

$$\text{Median} = \frac{7+8}{2} = 7.5$$

$$\begin{aligned} \text{Mean} &= \frac{2+2+4+7+8+9+10+12}{8} \\ &= \frac{54}{8} \\ &= 6.75 \end{aligned}$$

Mode = 2

2. Determine the minimum, maximum and quartiles for the data, then draw a Box and Whisker Plot. [4]

1, 2, 4, 6, 6, 8, 10

↓ ↓ ↓
Q₁ Q₂ Q₃

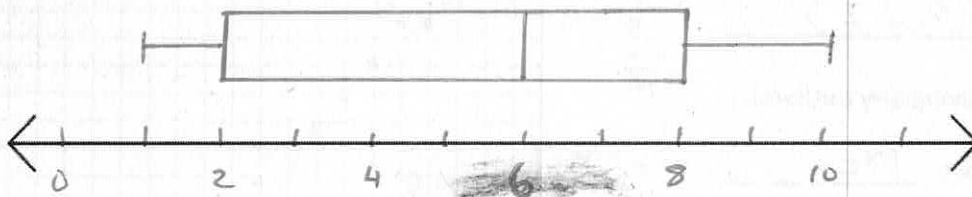
Min = 1

Q₁ = 2

Q₂ = 6

Q₃ = 8

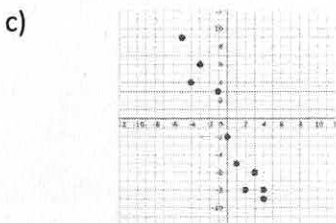
Max = 10



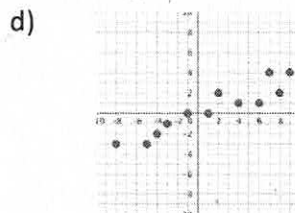
3. Describe each of the following as a positive, negative, or no correlation. [5]

a) The number of people living in a home and the grocery bill. Positive

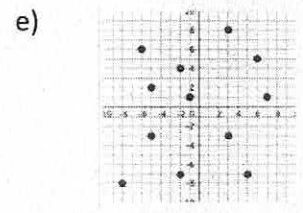
b) The age of a car and its value. Negative



Negative



Positive



No Correlation

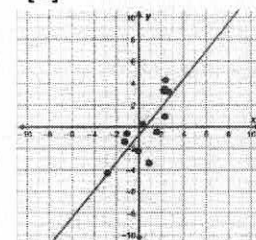
4. Circle the correlation coefficient that most likely fits the data shown. [1]

r = 0.1

r = -0.1

r = 0.8

r = -0.8



5. The data in the table which shows the height of an ice sculpture as it melts in the sun. [6]

Time (min)	0	2	3	4	6	7	8	10	12
Height (cm)	27.8	24.2	2.2	19.7	16.3	14	12.2	7.8	4

a) The independent variable is Time.

b) Draw a scatter plot of the data.

c) Describe the relationship.

As time increases, Height decreases.

d) State any outlier points. (3, 2.2)

e) Draw a line of best fit (removing any outliers).

f) Predict the height after 5 min. 18cm

Did you Interpolate or Extrapolate? _____

