

Scatter plots – Drawing and interpreting www.m4ths.com

L	6	20	10	2	18	12	14	9	8	15	23	16	17	25
W	5	15	9	1	14	11	14	7	7	11	17	13	12	18

Questions 1

The data above shows the length of a leaf in (cm) against the width of the leaf (in cm).

- Draw an accurate scatter graph to show the results and (fully labelled) with a line of best fit.
- State the type of correlation and summarise the result in one sentence.
- Draw a stem and leaf diagram to show the results for the length only
- Find the probability that if a leaf is chosen at random it (i) has a length of more than 14cm (ii) has a width less than 8cm.
- From the line of best fit find an estimate for (i) The width of a leaf that has a length of 21cm and (ii) The length of a leaf that has a width of 20cm.
- Is the data continuous or discrete?

%	10	30	90	50	30	70	60	50	20	85	55	35	40
H	180	160	170	170	140	145	150	175	140	155	150	150	145

Questions 2

The data above shows peoples height against their score in a maths test in one class in year 9.

- Before plotting a scatter graph state the correlation you would expect from the data
- Using a suitable scale plot and label a scatter graph to show the data.

Maths %	90	45	72	24	55	83	42	12	36	66	82	25	30
Science %	85	52	68	30	58	87	35	8	41	70	74	30	41

Questions 3

The table above shows peoples maths scores against their science scores. From the same graph:

- Draw a scatter graph to represent the data and label the graph and state the correlation.
- Using a line of best fit, estimate (a) the science % of someone who had a maths % of 60% and (b) the maths % of someone who had a science % of 48%
- Find the probability that someone chosen at random has a score of over 80% in both maths and science.

Maths %	60	20	90	60	30	80	33	96	48	50	10	62
Days absent	10	25	10	23	25	10	30	40	25	20	35	16

Questions 4

The data above shows the scores achieved in a maths test against the number of days pupils were absent from school.

- Before you draw a scatter graph state the correlation would you expect from the data.
- Draw and fully label the scatter graph with a line of best fit.
- Write one sentence to describe the findings of the survey.
- Approximate the number of days absent someone with a score of 70% had
- Draw a stem and leaf diagram for the days absent only locating stating (a) the mean (b) the mode and (c) the range.

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