

Statistics Sheet 1

Non-Calculator

Questions

Q1. Consider the set of temperatures of random days in June,

Temperatures	15	22	21	26	15	18
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- (a) Work out the mean
- (b) Work out the mode
- (c) Work out the median
- (d) Work out the range
- (e) Comment on the limitation of this data and what you could do to make it better

Q2.

I have a set of data and use the formula $f(x) = 2x + 3$ to get a new set of data.

- (a) How does the mean change?
- (b) How does the mode change?
- (c) How does the median change
- (d) How does the range change?

Q3.

We are given a set of data on Sibling ages in a school,

ages	$0 \leq x < 5$	$5 \leq x < 10$	$10 \leq x < 15$	$15 \leq x < 20$	$20 \leq x < 25$	$25 \leq x < 30$
frequency	4	5	11	8	4	2

- (a) Plot a Histogram to represent this data
- (b) Calculate an estimate for the mean using midpoints
- (c) Use your histogram to estimate the number of siblings aged between 12 and 18.
- (d) Calculate an estimate for the median using interpolation.

Q4.

We are given the hours studied for students in a class

Hours studied	$0 \leq x < 2$	$2 \leq x < 4$	$4 \leq x < 6$	$6 \leq x < 8$	$8 \leq x < 10$	$10 \leq x < 12$
Frequency	2	5	10	14	6	3

- (a) Draw a cumulative frequency graph
- (b) Draw a smooth s-curve
- (c) Use the graph to estimate the interquartile range
- (d) Calculate an estimate for the median
- (e) Use your diagram to estimate the number of students who study for more than over 5.5 hours
- (f) Explain why the mean may not be the best average to use for this data?