## Maths-it Podcast F-24

Foundation GCSE Revision
Averages

## Topics

Mean, median mode and range - Mean, median mode and range from a frequency table Mean, median mode and range from stem and leaf tables

## Questions

1. Fraser had 20 boxes of matches.

He counted the number of matches in each box.
The table gives information about his results.

| Number of <br> matches | Frequency |  |
| :---: | :---: | :---: |
| 29 | 4 |  |
| 30 | 10 |  |
| 31 | 3 |  |
| 32 | 3 |  |

(a) Write down the modal number of matches in a box.
$\qquad$
(b) Work out the range of the number of matches in a box.
$\qquad$
(c) Work out the mean number of matches in a box.

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2. Mitch did a survey of the number of emails some pupils in her school had received yesterday.

The frequency table shows her results.

| Number of emails | Frequency |
| :---: | :---: |
| 2 | 1 |
| 3 | 3 |
| 4 | 5 |
| 5 | 8 |
| 6 | 5 |

(a) Work out the number of pupils that Mitch asked.

Mitch thinks that the average number of emails pupils in her survey had received is 7 .
(b) Explain why Mitch cannot be correct.
$\qquad$
(c) Calculate the mean number of emails received.
3. Here are the spelling test marks of 12 girls and 8 boys.

| Girls: | 5 | 3 | 10 | 2 | 7 | 3 | 5 | 7 | 4 | 5 | 10 | 1 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Boys: | 2 | 5 | 9 | 3 | 6 | 8 | 5 | 9 |  |  |  |  |

(a) Write down the mode of the 20 marks.
$\qquad$
(b) Work out the median mark of the boys.
(c) Work out the range of the girls' marks.
(d) Work out the mean mark of all 20 students.
4. Ratul collected data about the age of 30 passengers on a bus.

Ratul showed his results in a stem and leaf diagram.

| 1 | 8 | 8 | 9 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2 | 1 | 2 | 3 | 4 | 4 | 8 | 9 |  |  |
| 3 | 0 | 3 | 5 | 5 | 7 | 7 | 8 |  |  |
| 4 | 2 | 2 | 3 | 3 | 6 | 6 | 8 | 8 |  |
| 5 | 1 | 2 | 3 | 3 | 5 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

Key $4 \mid 1 \quad$ stands for 41 years old
(a) Write down the number of people aged 37.
(b) Work out the range.
(c) Work out the median.
5. The table shows information about the number of hours that 120 children used a computer last week.

| Number of hours <br> $(h)$ | Frequency |
| :---: | :---: |
| $0<h \leq 2$ | 10 |
| $2<h \leq 4$ | 15 |
| $4<h \leq 6$ | 30 |
| $6<h \leq 8$ | 35 |
| $8<h \leq 10$ | 25 |
| $10<h \leq 12$ | 5 |

Work out an estimate for the mean number of hours that the children used a computer. Give your answer correct to 2 decimal places.

