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| **F Unit 7: Averages and range** | **Road Map** |
| In this unit you will learn about number. The aims are as follows:**LG1**: Knowledge**LG2**: Application**LG3**: Skills | Assessment Grades |  |  |
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| **Themes** | **Learning Goals/Outcomes/Content** |  |  |  |
| 7a Statistics and sampling | Specify the problem and plan an investigation; decide what data to collect and what statistical analysis is needed; consider fairness; |  |  |  |
| Recognise types of data: primary secondary, quantitative and qualitative; |  |  |  |
| Identify which primary data they need to collect and in what format, including grouped data;  |  |  |  |
| Collect data from a variety of suitable primary and secondary sources;  |  |  |  |
| Understand how sources of data may be biased;  |  |  |  |
| Explain why a sample may not be representative of a whole population;  |  |  |  |
| Understand sample and population. |  |  |  |
| 7b The averages | Calculate the mean, mode, median and range for discrete data; |  |  |  |
| Can interpret and find a range of averages as follows: |  |  |  |
| median, mean and range from a (discrete) frequency table; |  |  |  |
| range, modal class, interval containing the median, and estimate of the mean from a grouped data frequency table; |  |  |  |
| mode and range from a bar chart;  |  |  |  |
| median, mode and range from stem and leaf diagrams;  |  |  |  |
| mean from a bar chart; |  |  |  |
| Understand that the expression 'estimate' will be used where appropriate, when finding the mean of grouped data using mid-interval values; |  |  |  |
| Compare the mean, median, mode and range (as appropriate) of two distributions using bar charts, dual bar charts, pictograms and back-to-back stem and leaf;  |  |  |  |
| Recognise the advantages and disadvantages between measures of average |  |  |  |

**Links:**

LG1: The processes learned in this topic will enable you to calculate averages and range for data presented in a variety of forms.

LG2: You will apply the statistical processes from this topic to choose an average which is appropriate for the data set.

LG3: You will use your problem-solving skills and mastery of Statistics to design and carry out a statistical investigation to answer a question or solve a problem.

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