|  |  |
| --- | --- |
| **F Unit 13: Probability** | **Road Map** |
| In this unit you will learn about Probability. The aims are as follows:**LG1**: Knowledge**LG2**: Application**LG3**: Skills | Assessment Grades |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Themes** | **Learning Goals/Outcomes/Content** |  |  |  |
| 13a Probability 1 | Distinguish between events which are impossible, unlikely, even chance, likely, and certain to occur;  |  |  |  |
| Mark events and/or probabilities on a probability scale of 0 to 1;  |  |  |  |
| Write probabilities in words or fractions, decimals and percentages;  |  |  |  |
| Find the probability of an event happening using theoretical probability;  |  |  |  |
| Use theoretical models to include outcomes using dice, spinners, coins;  |  |  |  |
| List all outcomes for single events systematically;  |  |  |  |
| Work out probabilities from frequency tables, frequency trees, and two way tables;  |  |  |  |
| Record outcomes of probability experiments in tables;  |  |  |  |
| Add simple probabilities; |  |  |  |
| Identify different mutually exclusive outcomes and know that the sum of the probabilities of all outcomes is 1;  |  |  |  |
| Using 1 – *p* as the probability of an event not occurring where *p* is the probability of the event occurring;  |  |  |  |
| Find a missing probability from a list or table including algebraic terms; |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 13b Probability 2  | Find the probability of an event happening using relative frequency;  |  |  |  |
| List all outcomes for combined events systematically; Use and draw sample space diagrams;  |  |  |  |
| Estimate the number of times an event will occur, given the probability and the number of trials – for both experimental and theoretical probabilities; |  |  |  |
| Work out probabilities from Venn diagrams to represent real-life situations and also ‘abstract’ sets of numbers/values;  |  |  |  |
| Use union and intersection notation; |  |  |  |
| Compare experimental data and theoretical probabilities;  |  |  |  |
| Compare relative frequencies from samples of different sizes;  |  |  |  |
| Find the probability of successive events, such as several throws of a single dice;  |  |  |  |
| Use tree diagrams to calculate the probability of two independent events;  |  |  |  |
| Use tree diagrams to calculate the probability of two dependent events.  |  |  |  |
| Find the probability of an event happening using relative frequency;  |  |  |  |

**Links:**

LG1: You will calculate probabilities, list outcomes and complete venn diagrams and tree diagrams.

LG2: You will apply your knowledge of probability to compare theoretical and experimental probabilities and draw conclusions about bias.

LG3: You will solve complex probability problems involving combinations of events and conditional probabilities.