



Use this alongside our Walkthrough Guides to tick off the concepts you're confident with to plan your study and find areas of improvement!

Basic Probability

- I can explain what **probability** is
- I can measure probability in fractions, percentages, and decimals/proportions
- I can explain what a **favourable outcome** means

Probability Trees

- I can explain a **probability tree**
- I can draw a probability tree
- I can explain why the denominator can change for each branch/trial in a probability tree
- I can multiply along the branches to find the probabilities of those two outcomes
- I can use the symbol $P(X)$
- I can make sure the total probability adds to one

Two-Way Tables

- I can explain what a two-way table is and what it is used for
- I can use a two-way table to find a probability
- I can explain how two-way tables that use proportions are different to tables with raw data
- I can use a two-way table that has proportions instead of raw data

The Normal Distribution

- I can list the four features of the normal distribution
- I can list the three parameters of the normal distribution
- I can explain what the **mean** is
- I can explain what the **standard deviation** is
- I can explain what the **standard normal** is and why we need it
- I can convert to standard normal
- I can use the equation $z = \frac{x - \mu}{\sigma}$
- I can explain the relationship between z-score and x
- I can use my calculator to find distributed probabilities
- I can explain what the inverse normal is and when to use it
- I can use inverse normal to find x, the mean, or the standard deviation
- I can evaluate the claim of a normal/inverse normal problem by writing a brief sentence at the end of my calculations

Conditional Probabilities and Expected Value

- I can explain an **expected value**
- I can explain **theoretical probability**
- I can explain a **trial**
- I can explain **experimental probability**
- I can explain the differences between theoretical and experimental probability
- I can find the expected value
- I can explain how conditional probability is different to normal probability
- I can recognise **if** and **given that** questions as conditional probability
- I can use the symbol | to show given that
- I can use the conditional probability equation:
$$P(B | A) = \frac{P(A \text{ and } B)}{P(A)}$$
- I can use probability trees with conditional probability

Risk and Relative Risk

- I can explain **risk**
- I can calculate risk
- I can explain what **relative risk** is and how it relates to absolute risk
- I can use $\frac{\text{Risk of } A}{\text{Risk of } B}$ to find the relative risk
- I can make a statement comparing risks that prove or disprove a claim
- I can explain what a **claim** is and why we need to analyse them
- I can analyse a claim by checking the relative risk