

Y10 STATISTICS UNIT 7: PROBABILITY

Key words:

Probability – The chance of an event occurring.

Independent events – Two events that do not affect each other

Dependent events – Two events where the first event will affect the second event

Conditional probability – the probability of an event occurring, given that another event is already known to have occurred

Mutually exclusive events – events that cannot occur at the same time

Exhaustive events – A set of events where one of them must occur when an event happens

Bias – When one or events have a higher chance of happening.

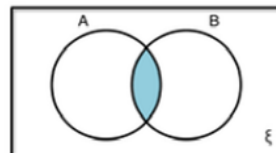
Fair – When every event has an equal chance of happening e.g. on a fair die, there is an even chance of each number being rolled.

Risk

There are 2 types of risk:

1. Absolute Risk – how likely an event is to happen. This is just relative frequency.

2. Relative Risk – How much more likely an event is to happen for one group compared to another group (e.g. comparing the probability of developing lung cancer for smokers and non-smokers).



The **intersection** is where two sets overlap.

$$A \cap B$$

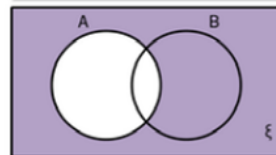
This means **A and B**.



If you put two sets together, you get the **union**.

$$A \cup B$$

This means **A or B**. Think marriage, they become 1!



The **complement** of A is the region that is not A.

$$A'$$

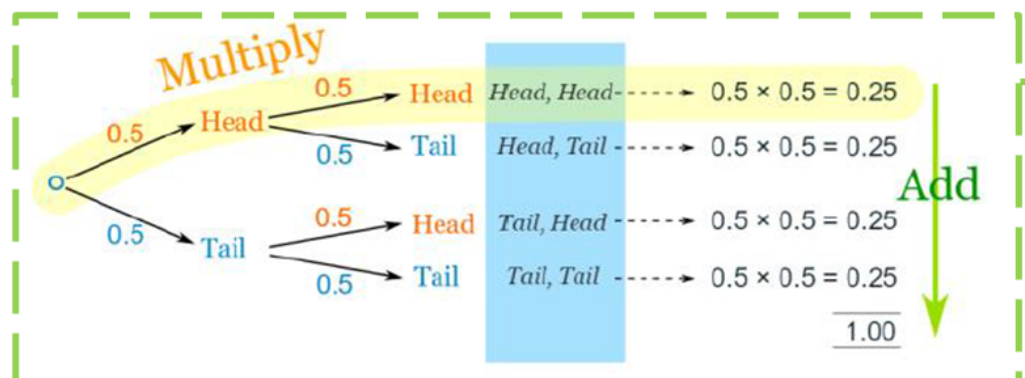
This means **not A**. Or outside of A

Tree Diagrams:

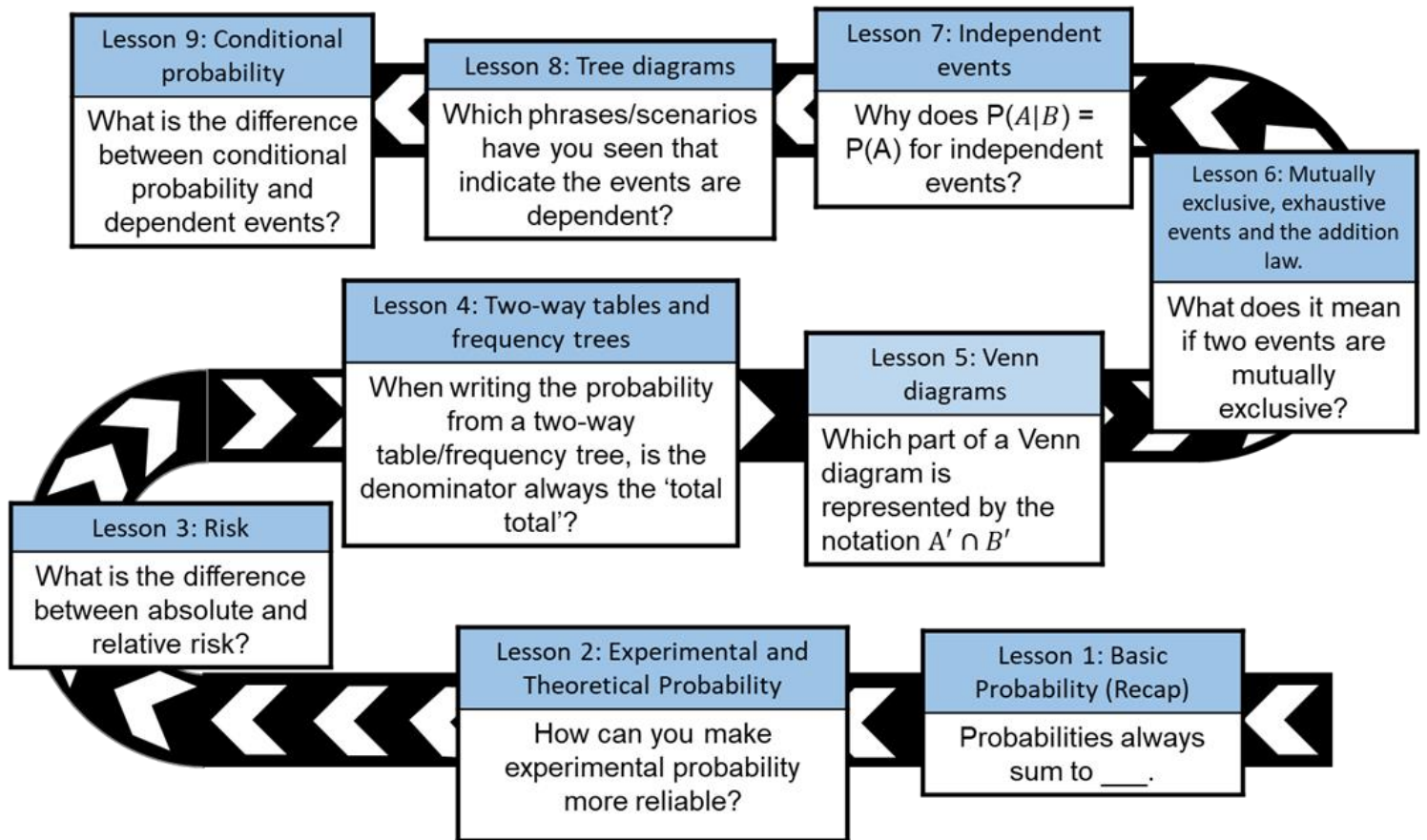
Replacement: The denominator stays the same on the second set of branches. The question will indicate that the item has been replaced or put back.

Without replacement: This is not clearly stated in the question. Usually uses words such as 'takes another', 'takes two' – doesn't mention anything about replacing the item. The denominator on the second set of branches will be 1 less than that of the first set.

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GCSE Statistics Learning Journey: Unit 7 - Probability



DEFINITION ETYMOLOGY/MORPHOLOGY	CHARACTERISTICS
EXAMPLES 	NON-EXAMPLES