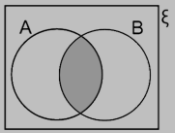
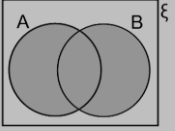
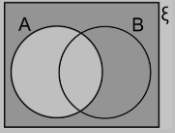


Year 10 Unit 4: Further Probability

SETS	
set	a collection of items with one of each member
{ }	brackets are written at the start and end when listing elements in the set
ξ	the universal set – everything we are interested in
\in	' element of a set ' or member of a set (a value in the set)
\notin	' not an element of a set '
\emptyset	the ' empty set '
$n(A)$	the number of elements in a set A

VENN DIAGRAMS		
Venn diagram	a diagram using circles or other shapes, to show the relationship between sets	
set	a collection of items with one of each member	
the intersection	$(A \cap B)$ in A and in B	
the union	$(A \cup B)$ in A or in B or in both	
the compliment	A' not in A	

PROBABILITY NOTATION	
$P(A) =$	the probability of an event A =
$P(A') =$	the probability that event A will not occur = the complement of A
$P(A \cap B) =$	the probability that both events A and B will occur = the intersection
$P(A \cup B) =$	the probability that event A or B or both will occur = the union

SAMPLING	
population	in statistics, the whole group being studied. (not the population of a city or country)
sampling	taking a small group of the population to use for your study (to save the money and time needed to ask everyone)
random sampling	sampling where each member of the population is equally likely to be picked. e.g. names out of a hat
systematic sampling	a form of random sampling using intervals , e.g. picking every 10 th person on the register
stratified sampling	a form of sampling that is more representative of the groups of people within a population
biased	when something is not fair

OUTCOMES / EVENTS	
exhaustive	outcomes are exhaustive if they cover the entire range of possible outcomes
mutually exclusive	events are mutually exclusive if they cannot happen at the same time
independent events	events where the outcome of an event is not affected by the outcome of a previous event
dependent events	events where the outcome of an event is affected by the outcome of a previous event
conditional probability	the probability of an event happening, given that another event has already happened

Links to: SYSTEMATIC LISTING	
product rule for counting	if there are x ways of doing something and y ways of doing something else, then there are xy ways of performing both (the product of the two numbers)

REPRESENTING PROBABILITIES		
sample space	the set of all possible outcomes of an experiment	
probability tree	a diagram shaped like a tree used to display a sample space by using one branch for each possible outcome	