Topics	What students need to learn:		
		Content	Guidance
3 **Probability**	3.1	**Understand and use mutually exclusive and independent events when calculating probabilities.** **Link to discrete and continuous distributions.**	**Venn diagrams or tree diagrams may be used.** Set notation to describe events may be used. Use of $\mathrm{P}(B\|A) = \mathrm{P}(B)$, $\mathrm{P}(A\|B) = \mathrm{P}(A)$, $\mathrm{P}(A \cap B) = \mathrm{P}(A)\,\mathrm{P}(B)$ in connection with independent events. **No formal knowledge of probability density functions is required but students should understand that area under the curve represents probability in the case of a continuous distribution.**
	3.2	Understand and use conditional probability, including the use of tree diagrams, Venn diagrams, two-way tables. Understand and use the conditional probability formula $\mathrm{P}(A\|B) = \dfrac{\mathrm{P}(A \cap B)}{\mathrm{P}(B)}$	Understanding and use of $\mathrm{P}(A') = 1 - \mathrm{P}(A)$, $\mathrm{P}(A \cup B) = \mathrm{P}(A) + \mathrm{P}(B) - \mathrm{P}(A \cap B)$, $\mathrm{P}(A \cap B) = \mathrm{P}(A)\,\mathrm{P}(B\|A)$.

Topics	What students need to learn:		
	Content		Guidance
3 **Probability** *continued*	3.3	Modelling with probability, including critiquing assumptions made and the likely effect of more realistic assumptions.	For example, questioning the assumption that a die or coin is fair.