

School administrators, Heads of Learning Area – Mathematics and teachers of Mathematics Applications ATAR Year 12 are requested to note for 2023 the following minor syllabus changes. The syllabus is labelled as ‘For teaching from 2023’.

### Syllabus changes

The content identified by ~~strike through~~ has been deleted from the syllabus and the content identified in *italics* has been revised in the syllabus for teaching from 2023

3.1.18 – ~~Recognise~~ *identify* possible non-causal explanations for an association, including coincidence and confounding due to a common response to another variable, and communicate these explanations in a systematic and concise manner

3.3.3 - construct an adjacency matrix from a given graph or digraph and use the matrix to *form multi-stage matrices* to solve associated problems

### Glossary

<b>Degree of a vertex (graph)</b>	In a graph, the degree of a vertex is the number of edges <i>that enter or exit from the vertex, thus loops are counted twice</i> <del>edges incident with the vertex, with loops counted twice. It is denoted deg <math>v</math></del>
<b>Cycle</b>	A cycle is a closed <del>path walk</del> which begins and ends at the same vertex and which has no repeated edges or vertices except the first. If a, b, c and d are the vertices of a graph, the closed walk bcd b that starts and ends at vertex b (shown dotted) an example of a cycle.
<b>Hamiltonian graph cycle</b>	<i>A connected graph is Hamiltonian if it contains a closed path (starts and ends at the same vertex), that includes every vertex (except the first one) once only. No edge is repeated.</i> <del>a connected graph is Hamiltonian if it contains a closed path (starts and ends at the same vertex), that is, includes every edge and every vertex (except the first one) once only</del>
<b>Semi- Hamiltonian graph path</b>	<i>A semi-Hamiltonian graph contains a path that includes every vertex in a graph once only but is not a cycle.</i> <del>A Hamiltonian path is a path that includes every vertex in a graph once only. A Hamilton path that begins and ends at the same vertex is a Hamiltonian cycle.</del>  <del>These concepts are useful in solving practical problems, such as: planning a sight-seeing tourist route around a city, or the travelling salesman problem.</del>
<b>Average percentage method</b>	In the average percentage method for calculating a seasonal index, the data for each ‘season’ are expressed as percentages of the average for the year. The percentages for the corresponding ‘seasons’ for different years are then averaged using <i>a mean</i> <del>or median</del> to arrive at a seasonal index.

