

NETWORKS



For each concept you need to tick **one** box in the EXERCISES column and **all three** boxes in the BOUND REFERENCE column.

CONCEPT	EXERCISES	BOUND REFERENCE
An introduction to graph theory and terminology such as edges , degree , vertex , and loop used when describing networks in Mathematics and how adjacency matrices can also describe graphs.	<p>Exercise 9B</p> <p>Entry: 1ac, 3 & 4 <input type="checkbox"/></p> <p>Expected: 1ac, 2, 3 & 4 <input type="checkbox"/></p> <p>Expected +: 1, 2, 3 & 4 <input type="checkbox"/></p>	<p>Concept <input type="checkbox"/></p> <p>How to <input type="checkbox"/></p> <p>Example(s) <input type="checkbox"/></p>
	<p>Exercise 9C</p> <p>Entry: 1ace, 1, 2ac, 3ac, & 1acbd <input type="checkbox"/></p> <p>Expected: 1ace, 1, 2ac, 3ac, 4, 5 & 9C-3 <input type="checkbox"/></p> <p>Expected +: 1ace, 1, 2ac, 3ac, 4, 5, 6 & 9C-3 <input type="checkbox"/></p>	
The concept of planar graphs and how to use Euler's formula when working with these.	<p>Exercise 9D</p> <p>Entry: 1, 2ace, 3 & 4abc <input type="checkbox"/></p> <p>Expected: 1, 2ace, 3 & 4aceg <input type="checkbox"/></p> <p>Expected +: 2ace, 3, 4ace & 5 <input type="checkbox"/></p>	<p>Concept <input type="checkbox"/></p> <p>How to <input type="checkbox"/></p> <p>Example(s) <input type="checkbox"/></p>
Ideas about travelling through graphs and an understanding of the terms walk , trail , path , circuit & cycle .	<p>Exercise 9E</p> <p>Entry: 1 <input type="checkbox"/></p> <p>Expected: 1 <input type="checkbox"/></p> <p>Expected +: 1 <input type="checkbox"/></p>	<p>Concept <input type="checkbox"/></p> <p>How to <input type="checkbox"/></p> <p>Example(s) <input type="checkbox"/></p>
Identify traversable graphs and applying the rules to support.	<p>Exercise 9F</p> <p>Entry: 1,3,5,7 <input type="checkbox"/></p> <p>Expected: 1,3,5,7, <input type="checkbox"/></p> <p>Expected +: 1,3,5,7,9 <input type="checkbox"/></p>	
The concept of Eulerian Trails and Circuits and how to use them in application	<p>Exercise 9G</p> <p>Entry: 1a-c, 2ab, 4, <input type="checkbox"/></p> <p>Expected: 1 acegi, 2ab, 4, 5 <input type="checkbox"/></p> <p>Expected +: 1 acegi, 2ab, 4, 5 <input type="checkbox"/></p>	<p>Concept <input type="checkbox"/></p> <p>How to <input type="checkbox"/></p> <p>Example(s) <input type="checkbox"/></p>
The concept of Hamiltonian Paths and Cycles and the applications of these.	<p>Exercise 9H</p> <p>Entry: 1ab, 2ab 4ab <input type="checkbox"/></p> <p>Expected: 1ab, 2abd 4ab <input type="checkbox"/></p> <p>Expected +: 1ab, 2abd 4ab <input type="checkbox"/></p>	

<p>Working with weighted graphs and using these to find shortest paths.</p>	<p style="text-align: center;"><u>Exercise 9I</u> <u>Entry:</u> 1- 4 <u>Expected:</u> 1 - 5 <u>Expected +:</u> 1 - 5</p>	<p>Concept <input type="checkbox"/> How to <input type="checkbox"/> Example(s) <input type="checkbox"/></p>
<p>The concept of minimum spanning trees and identifying these in a connected graph.</p>	<p style="text-align: center;"><u>Exercise 9J</u> <u>Entry:</u> 1ab, 2, 3ab, 4ab, 5a <u>Expected:</u> 1ab, 2, 3ace, 4abc, 5ac, 6 <u>Expected +:</u> 1ab, 2, 3ace, 4abc, 5ac, 6</p>	<p>Concept <input type="checkbox"/> How to <input type="checkbox"/> Example(s) <input type="checkbox"/></p>
<p>Applying knowledge of networks to a real world situation.</p>	<p style="text-align: center;"><u>Application Task</u> <u>Entry:</u> 1, 2, 3 & 4 <u>Expected:</u> 1, 2, 3, 4 & 5 <u>Expected +:</u> 1, 2, 3, 4, 5 & 6</p>	