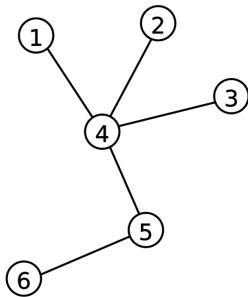## 1. Link words and definitions:

The goal in a CSP problem is to obtain •

• an assignment of a value to each variable such that all the constraints are satisfied.

A solution is •

• a limitation or restriction

Cryptoarithmetic problems •

• generates all the successors of the current state

Depth search •

• assign distinct digits to letters

A constraint is •

• is a recursive search method

Backtracking •

• a complete and consistent assignment

2. Complete the following sentence with the right words:
Arcs, nodes, edge, vertices, complete, consistent, binary, solution, constraint

An assignment is _____ if it does not violate any of the constraints.
An assignment is _____ if it includes all variables. An assignment is a _____ if it is consistent and complete; such an assignment is said to *solve* the _____ satisfaction problem.

A graph G consists of two types of elements, namely vertices and edges, also known as _____ and _____.

For each _____ (3, 4), the _____ 3 and 4 are said to be adjacent to one another.

There exists a _____ relation between 1 and 4

3. Given the following graph colouring problem, where we have red, green and blue colours and 4 cities connected as follows.

   a. How could we represent these connections in Matlab? Discuss with your classmates.
   b. Apply backtracking to find a solution to this problem.