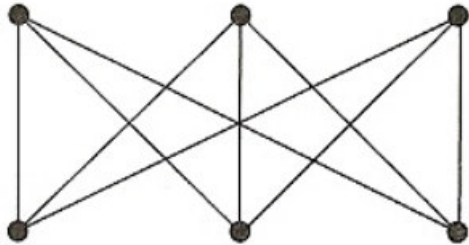


This is three questions.

Question #1 – find the chromatic number of the graph.



Question #2 – It might be supposed that if a graph has a large number of vertices and each vertex has a large degree, then the chromatic number would have to be large. Show that this conjecture is incorrect by constructing a graph with at least 12 vertices, each of degree at least 3, that is chromatic number 2.

Need Attached Graph in editable format, i.e. xls, doc, etc.

Question #3 – Find the adjacency matrix and adjacency list for the directed graph in the indicated exercise. Order the vertices according to alphabetical order.

Let  $S = \{1,2,4,8\}$  and  $R = \{(1,8), (2,4), (8,2), (4,1), (2,2), (8,1)\}$  be the relation defined S. Draw the directed multigraph of this relation. Need Attached Graph in editable format, i.e. xls, doc, etc.