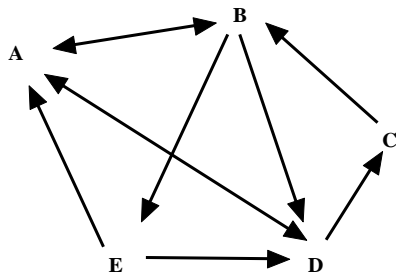


Graph Theory – Worksheet

1. 02-03 C3 Graph Theory

How many different cycles are contained in the following directed graph?

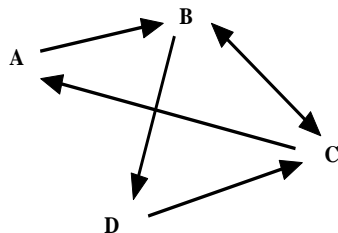


2. 02-03 C3 Graph Theory

How many 0's are in the adjacency matrix of the directed graph above?

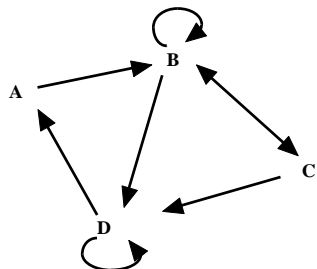
3. 03-04 C3 Graph Theory

How many paths from A of length 2 exist in the following directed graph?



4. 03-04 C3 Graph Theory

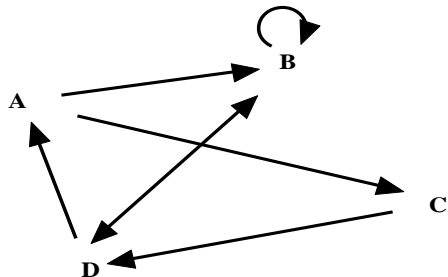
How many simple paths of length 2 exist in the following directed graph?



Graph Theory – Worksheet

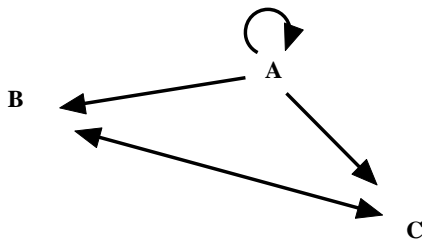
5. 04-05 C3 Graph Theory

Write the adjacency matrix for the directed graph.



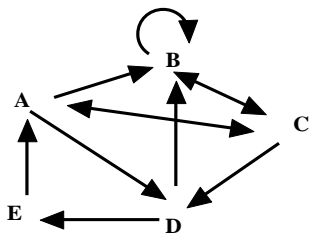
6. 04-05 C3 Graph Theory

How many paths of length 2 exist in the directed graph?



7. 05-06 C3 Graph Theory

Draw the adjacency matrix for the following directed graph:



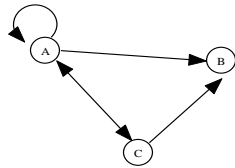
8. 05-06 C3 Graph Theory

Draw a directed graph with vertices A, B, C, D, E and edges AB, BA, AD, BC, DC, ED EA.

Graph Theory – Worksheet

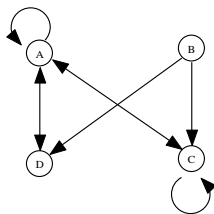
9. 06-07 C3 Graph Theory

How many paths of length 2 exist in this directed graph?



10. 06-07 C3 Graph Theory

Write the adjacency matrix for the directed graph.



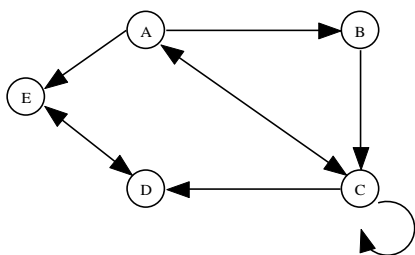
11. 07-08 C3 Graph Theory

Draw the directed graph containing the following vertices and edges.

Vertices: {A, B, C, D} Edges: {AB, BC, CA, AD, DA, CB}

12. 07-08 C3 Graph Theory

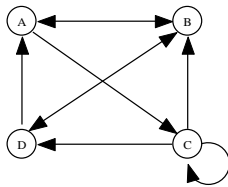
Write the adjacency matrix for the directed graph.



Graph Theory – Worksheet

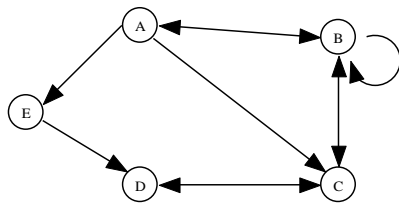
13. 08-09 C3 Graph Theory

Given the following directed graph, how many paths of length 2 exist?



14. 08-09 C3 Graph Theory

Write the adjacency matrix for the directed graph.



15. 09-10 C3 Graph Theory

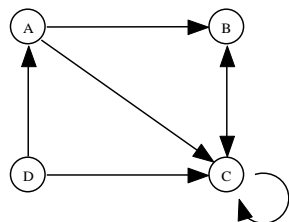
Draw the adjacency matrix for the directed graph containing the following vertices and edges.

Vertices: {A, B, C, D, E}

Edges: {AB, BC, EA, DC, CC, CE, CD, BE, AE, EB, DA}

16. 09-10 C3 Graph Theory

How many paths of length 2 are there in the following directed graph?



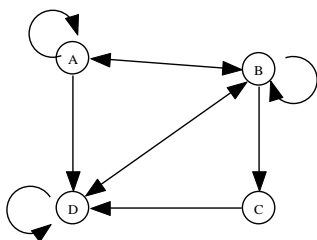
Graph Theory – Worksheet

17. 10-11 C3 Graph Theory

Draw the directed graph containing the following vertices and edges.
Vertices: {A, B, C, D} Edges: {AB, BC, AD, CA, DA, CD, CB}

18. 10-11 C3 Graph Theory

How many paths of length 2 exist from B to D?

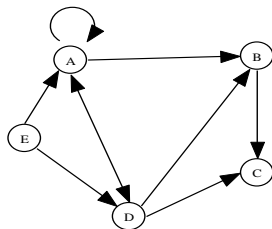


19. 11-12 C3 Graph Theory

Draw the directed graph with the following vertices {A, B, C, D} and directed edges {AB, BC, BB, BA, CD, CB, AC}.

20. 11-12 C3 Graph Theory

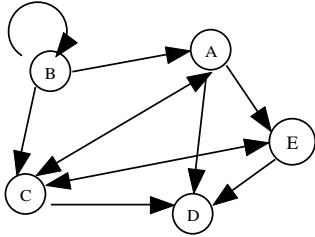
Given the directed graph at the right, construct its adjacency matrix.



Graph Theory – Worksheet

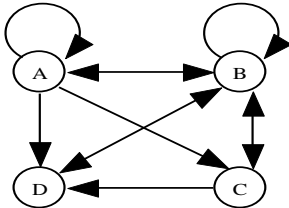
21. 12-13 C3 Graph Theory

Write the adjacency matrix for the following directed graph:



22. 12-13 C3 Graph Theory

How many paths of length 2 exist from vertex B?



23. 13-14 C3 Graph Theory

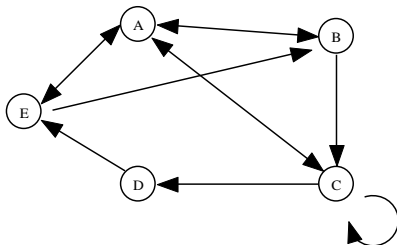
Draw the directed graph containing the following vertices and edges.

Vertices: {A, B, C, D}

Edges: {AB, BB, BC, CD, DA, AD, AC}

24. 13-14 C3 Graph Theory

Write the adjacency matrix for the directed graph.



Graph Theory – Worksheet

25. 14-15 C3 Graph Theory

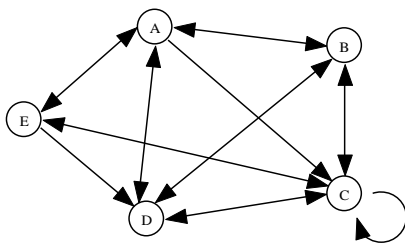
Draw the directed graph containing the following vertices and edges.

Vertices: {A, B, C, D, E}

Edges: {AB, AA, CB, AD, DE, EC, BE, EE, CD, BD, DA}

26. 14-15 C3 Graph Theory

Write the adjacency matrix for the directed graph.



27. 15-16 C3 Graph Theory

Draw the directed graph containing the following vertices and edges.

Vertices: {A, B, C, D}

Edges: {AC, AB, BC, CD, BD, BA, CA, DB}

28. 15-16 C3 Graph Theory

Write the adjacency matrix for the directed graph.

