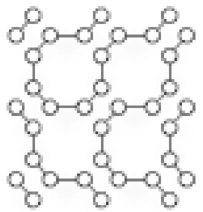
1a. A
1b. A
1c. B

2a. B

3a. F
3b. C

4a. D
4b. F
4c. C
4d. C

5a. E
5b. B
5c. C

6a. A
6b.


6c. A. Comment: the question is needlessly unclear because I'm using n instead of N and M. That's stupid of me.

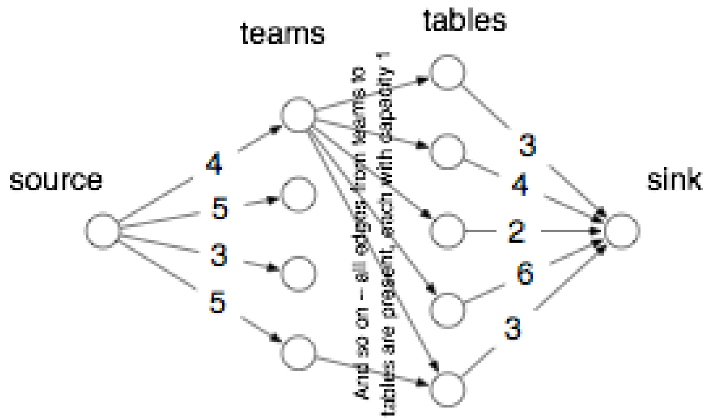
6d. A

6e. A

6f. A

7a. C
7b. A
7c. A
7d. B
7e. C

8a. D
8b. A
8c. A
8d. There is an arc from the source to every team with capacity m_i There is an arc from every table to the sink with capacity n_j. There is an arc from every team to every table with capacity 1.

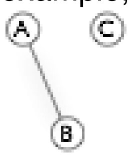


A valid arrangement exists if and only if there is a flow of size m_1+m_2+...+m_M

9a. A. (Comment: this question contains a typo. It should read "A list of matches")
9b. B
9c. A
9d. A

10a. D (Comment: should read "team" instead of "time")
10b. A
10c. B

11a. B
11b. A
11c. B
11d. E
11e. B
11f. Given an instance G=(V,E), k to graph coloring, construct an instance to Hooligans as follows. The number of floors is k. There is a team for every vertex. There is a match between u and v if uv belongs to E. An assignment of teams to floors now corresponds to an assignment of vertices to colors: teams that ever meet will be on different floors, so neighbouring vertices will receive different colors. For example, the question if the following graph



can be 2-coloured corresponds to the instance

3 1 2
A
B
C
A - B