

MATH 154: Homework 6

Professor Kane

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Question 1

- (a) Let us represent this tournament using a graph. Let each team be represented by a vertex, and each match between two teams be represented by an edge. Since we want to host match between all pairs of teams, this graph corresponds to the complete graph K_n , where $n = \text{number of teams}$. Further, let each week be represented by a "color". Now, the optimal matchups for this tournament correspond to a minimum edge-coloring of this graph.