Given: A NxN chess board with k white bishop.
Aim: Largest number of rook.

Setup:

Construct bipartite graph with all the columns as vertexes on the left hand side and all the rows as vertexes on the right hand side. Then make a vertex on the left hand side of left hand side vertexes. What's more make a vertex on the right hand side of right hand side vertexes. Each vertexes on left hand side should connect all vertexes on right hand side.

Solution:

The vertex on the leftmost graph represents the start point, rightmost vertex represented the end point. Connect the leftmost vertex with all the vertexes on left hand side. Then connect the rightmost vertex with all vertexes on the right hand side.

All edges on the graph has weight of one because on one cell we can only have one chess piece. So that it is only weight one. The connected two vertexes represents the position that can place on board. For all cells that can be attacked by bishops should be unconnected on the graph, so it means the vertexes that can represents the position of cells should not be connected.

Now, The weight of all edges that connected by two vertexes which on the have same column or same row with other rooks should be set to 0, The other edges should be set to 1.

We now find max flow in such a network using the Edmons-karp algorithm. Then we use the graph we constructed to find minimal cut. All edges occupied with a flow from the connecting paths and count the number of paths that we connected in this graph will be the largest solution.