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3a) Assume brute force/backtracking Algorithm
Key to the solution is an adjacency matrix

Assume X[n,n] is a connection matrix for the graph G.

```
backtrack(m)
  for i:=1 to n
    r_backtrack(X[i], i, m) // Check from current node only

r_backtrack(X[ ], K, M) // each // find m nodes in this row
                           starting at K
  for j:=k to n
    IF j ≠ i AND x[j] == false
      // add x[K,j] to solution set
      IF m==1
        output solution
      else // need more
        r_backtrack(X[j], j, m-1)
```

Alternate solution (my preferred + non recursive)
Create adjacency matrix, assume each node is connected to itself then count the false in each node connections

OR

Create adjacency list and look for list entry count less than n-m. Nodes missing form independent set.

3b) RT (3a) = $\Theta(\sum_{1}^{n} k) = \Theta(n^2)$