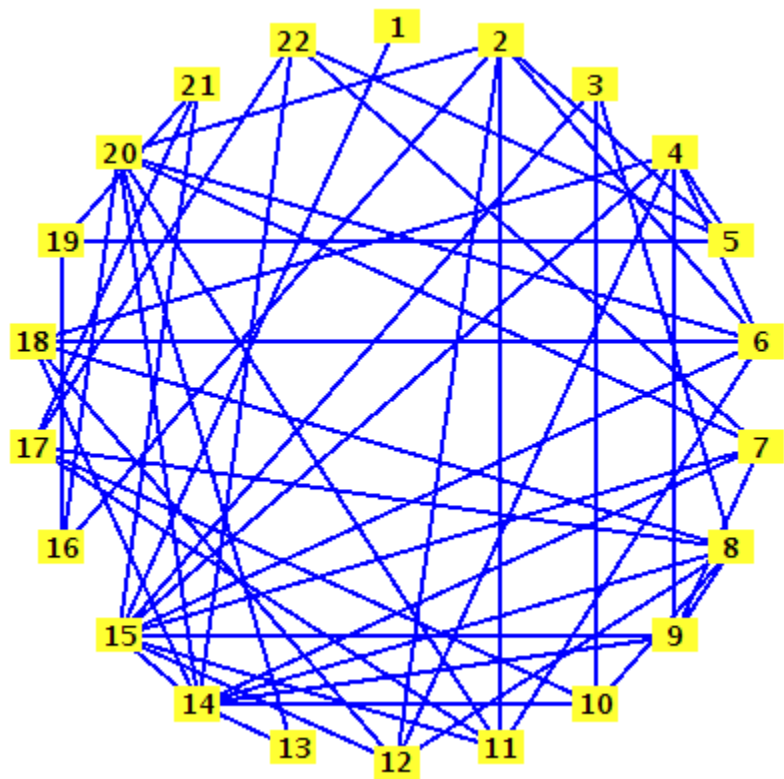
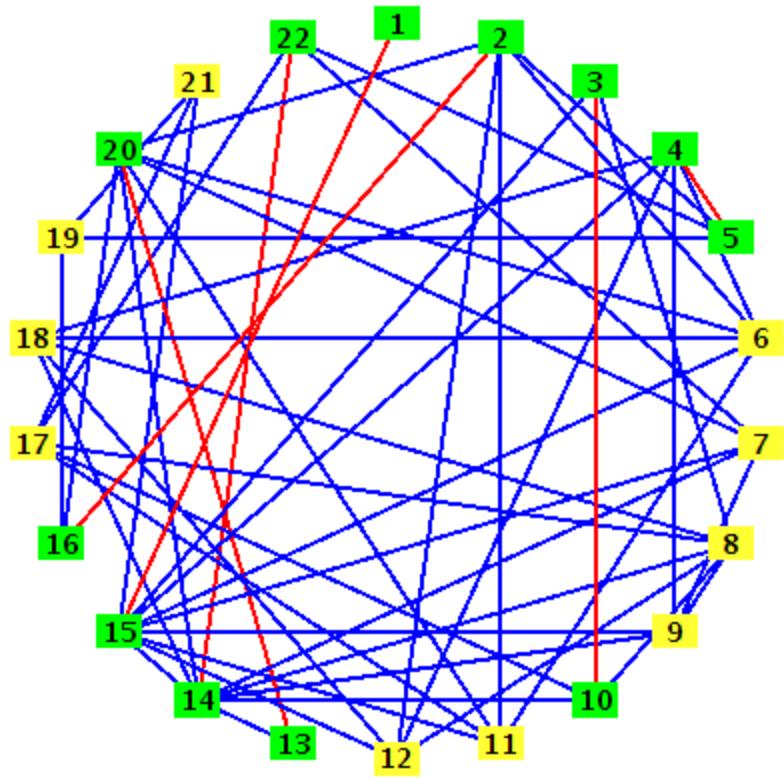


Demonstration of augmenting paths. Let us start with a graph of order 22.

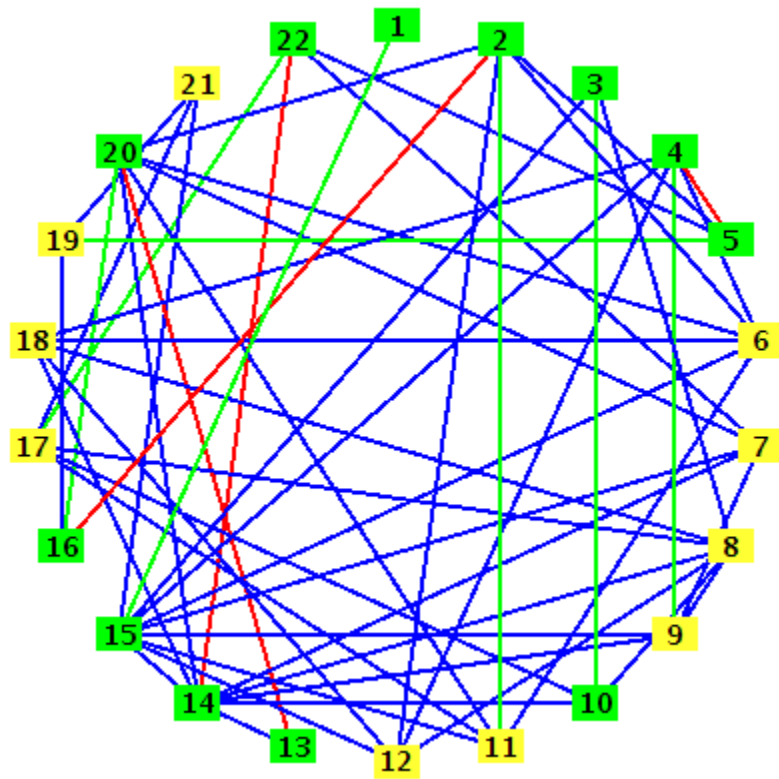


We now select a matching M . It has 6 edges.

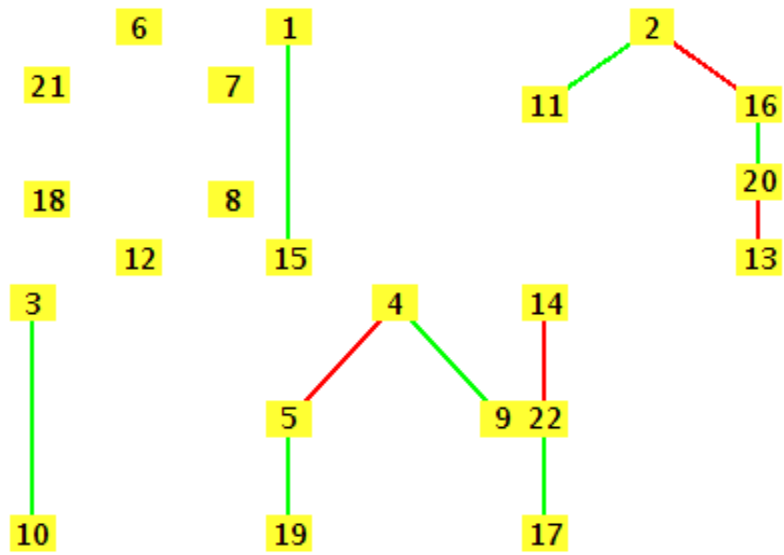


The red edges are the matching. The edges in the matching are: {1,15}, {3,10}, {4,5}, {2,16}, {13,20}, {14,22}.

We now find a bigger matching, it has 7 edges: $\{4, 9\}, \{3, 10\}, \{2, 11\}, \{1, 15\}, \{16, 20\}, \{17, 22\}, \{5, 19\}$



Note that some of the edges, like $\{1, 15\}$ and $\{3, 10\}$ overlap. The augmenting path will be produced by the red and green edges, so we will isolate them:



The augmenting path is: 19 – 5 – 4 – 9 And the matching M will be augmented to the matching:

{3,10} {1,15} {2,16}, {13,20}, {5,19} {4,9}, {14,22}