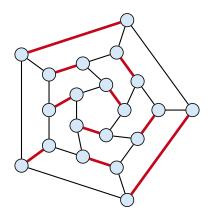
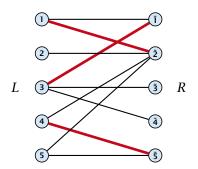
Matching

- ▶ Input: undirected graph G = (V, E).
- ▶ $M \subseteq E$ is a matching if each node appears in at most one edge in M.
- Maximum Matching: find a matching of maximum cardinality



Bipartite Matching

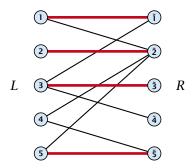
- ▶ Input: undirected, bipartite graph $G = (L \uplus R, E)$.
- ▶ $M \subseteq E$ is a matching if each node appears in at most one edge in M.
- Maximum Matching: find a matching of maximum cardinality





Bipartite Matching

- ▶ Input: undirected, bipartite graph $G = (L \uplus R, E)$.
- ▶ $M \subseteq E$ is a matching if each node appears in at most one edge in M.
- Maximum Matching: find a matching of maximum cardinality





Bipartite Matching

- ▶ A matching M is perfect if it is of cardinality |M| = |V|/2.
- For a bipartite graph $G = (L \uplus R, E)$ this means |M| = |L| = |R| = n.

