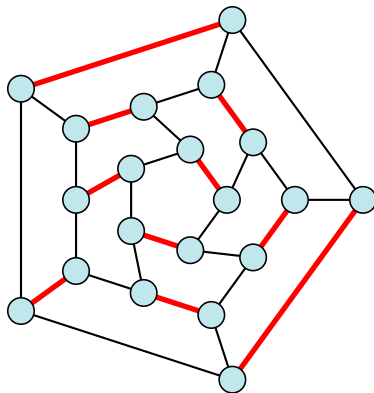


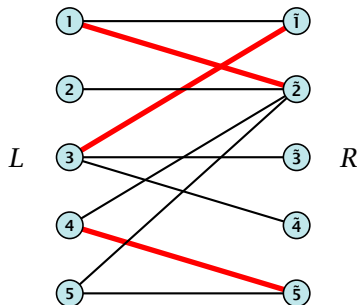
Matching

- ▶ 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



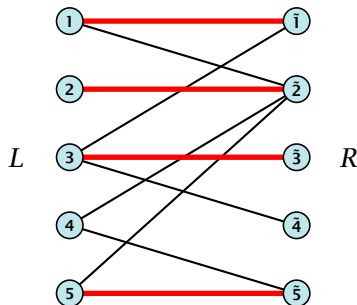
Bipartite Matching

- ▶ 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 $|M| = |L| = |R| = n$.

