

Reminder VI

• Depth-first search (DFS) : $e_{i+1} \in \text{Front}(G, T_i)$

with largest index for $o(e_{i+1})$. "explore far"

• Breadth-first search (BFS) : $e_{i+1} \in \text{Front}(G, T_i)$

with minimal index for $o(e_{i+1})$. "explore neighbours"

• For DFS, finished vertex and DFS-path

\leadsto either $\deg(x_p) = 1$ or all neighbors in a cycle.

• Bridge component : Components of $G-B$.

• Contraction over connected subgraph.

\leadsto Contraction over bridge components leads to a tree

• Use DFS-path + contraction for finding bridges.

• Graphs with edge weight :
with root x_0

Prufer's algorithm

• Tree T with minimum total edge weight. \checkmark

• Path from x_0 to y with minimum total edge weight.

Dijkstra's algorithm

