

Dijkstra's Algorithm (SSSP)

What is the running time?

```
DijkstraSSSP(G, s):
6   foreach (Vertex v : G):
7       d[v] = +inf
8       p[v] = NULL
9   d[s] = 0
10
11  PriorityQueue Q // min distance, defined by d[v]
12  Q.buildHeap(G.vertices())
13  Graph T        // "labeled set"
14
15  repeat n times:
16      Vertex u = Q.removeMin()
17      T.add(u)
18      foreach (Vertex v : neighbors of u not in T):
19          if _____ < d[v]:
20              d[v] = _____
21              p[v] = m
```