Breitensuche

BFS(G, s)

```
1   for each vertex u ∈ V[G] − {s}
2        do color[u] ← WHITE
3              d[u] ← ∞
4              π[u] ← NIL
5   color[s] ← GRAY
6   d[s] ← 0
7   π[s] ← NIL
8   Q ← ∅
9   ENQUEUE(Q, s)
10  while Q ≠ ∅
11      do u ← DEQUEUE(Q)
12          for each v ∈ Adj[u]
13              do if color[v] = WHITE
14                    then color[v] ← GRAY
15                         d[v] ← d[u] + 1
16                         π[v] ← u
17                         ENQUEUE(Q, v)
18          color[u] ← BLACK
```

(a)

Q

s
0

(b)

Q

w	r
1	1

(c)

Q

r	t	x
1	2	2

(d)

Q

t	x	v
2	2	2

(e)

Q

x	v	u
2	2	3

(f)

Q

v	u	y
2	3	3

(g)

Q

u	y
3	3

(h)

Q

y
3

(i)

Q $\emptyset$

3