

MST-PRIM(G, w, r)

- 1 **for** each $u \in G.V$
- 2 $u.key = \infty$
- 3 $u.\pi = \text{NIL}$
- 4 $r.key = 0$
- 5 $Q = G.V$
- 6 **while** $Q \neq \emptyset$
- 7 $u = \text{EXTRACT-MIN}(Q)$
- 8 **for** each $v \in G.Adj[u]$
- 9 **if** $v \in Q$ and $w(u, v) < v.key$
- 10 $v.\pi = u$
- 11 $v.key = w(u, v)$

