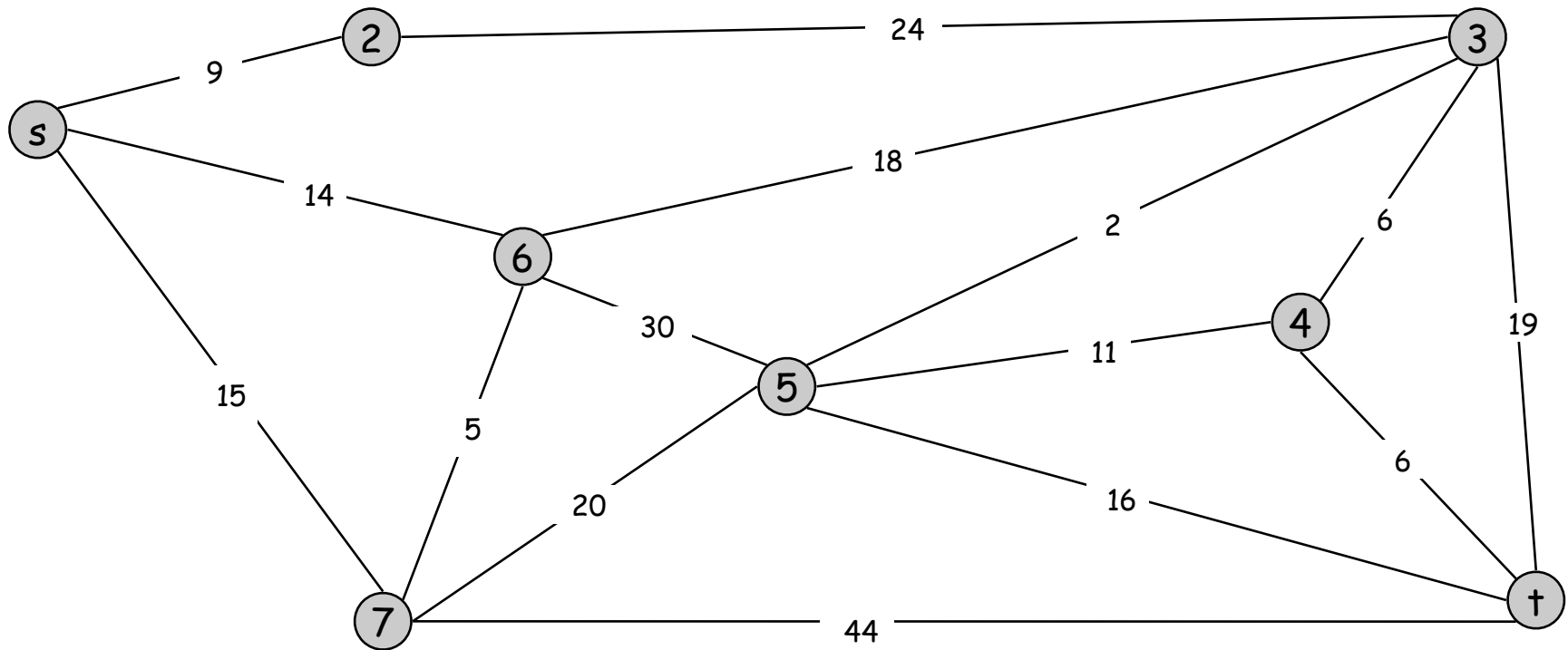


# Dijkstra's Shortest Path Algorithm

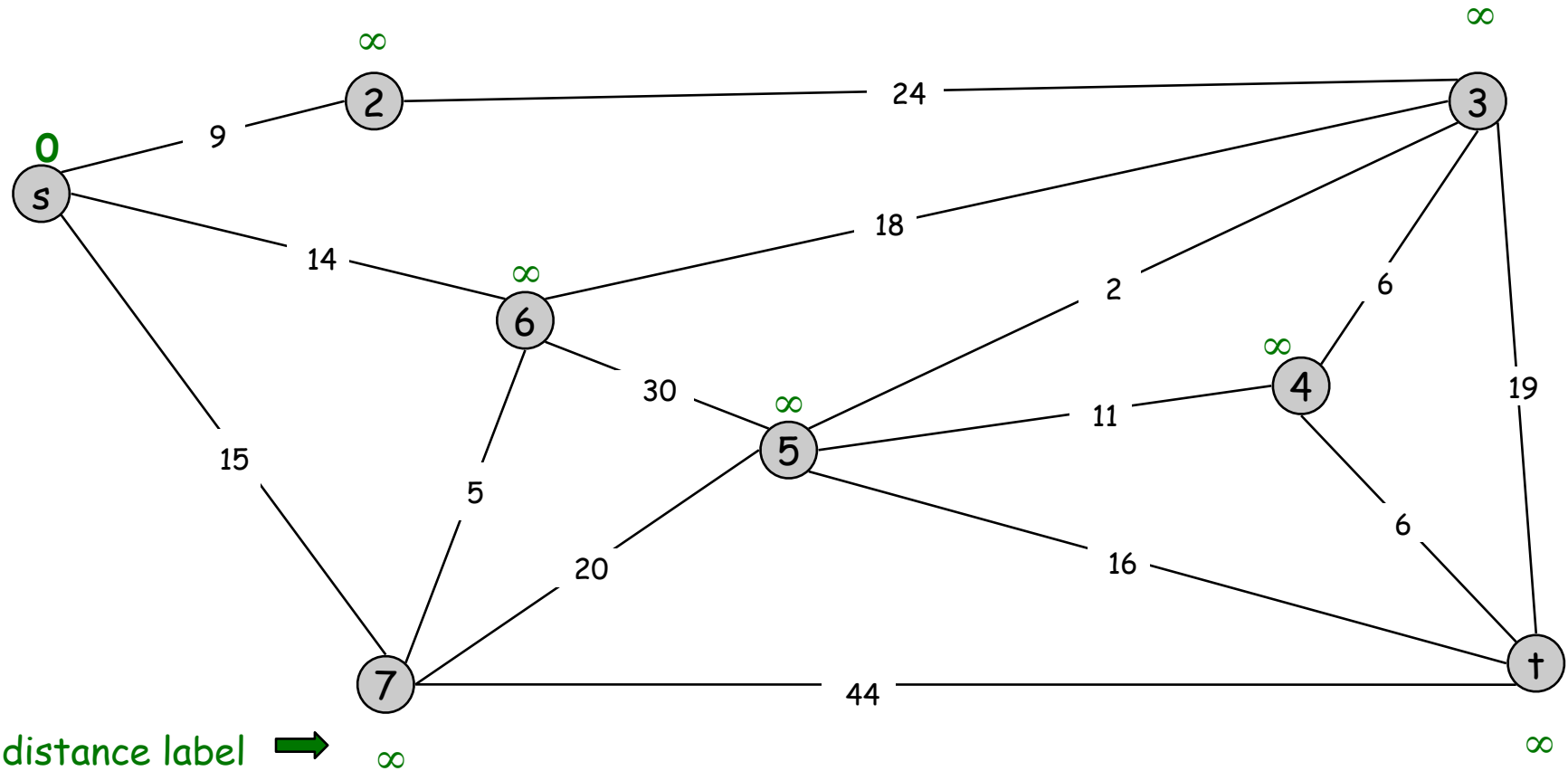
Find shortest path from s to t.



# Dijkstra's Shortest Path Algorithm

$S = \{ \}$

$PQ = \{ s, 2, 3, 4, 5, 6, 7, t \}$

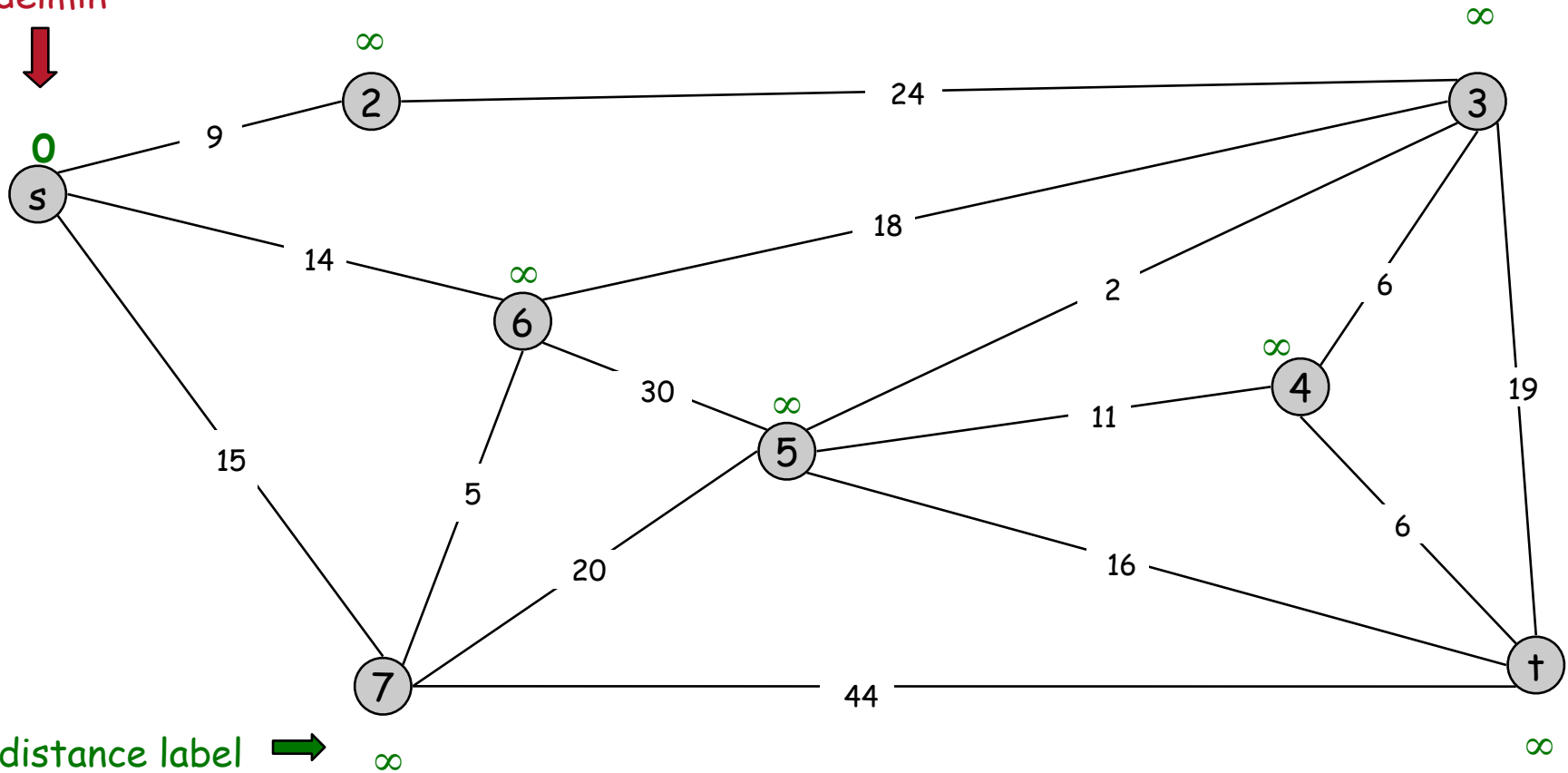


# Dijkstra's Shortest Path Algorithm

$S = \{ \}$

$PQ = \{ s, 2, 3, 4, 5, 6, 7, t \}$

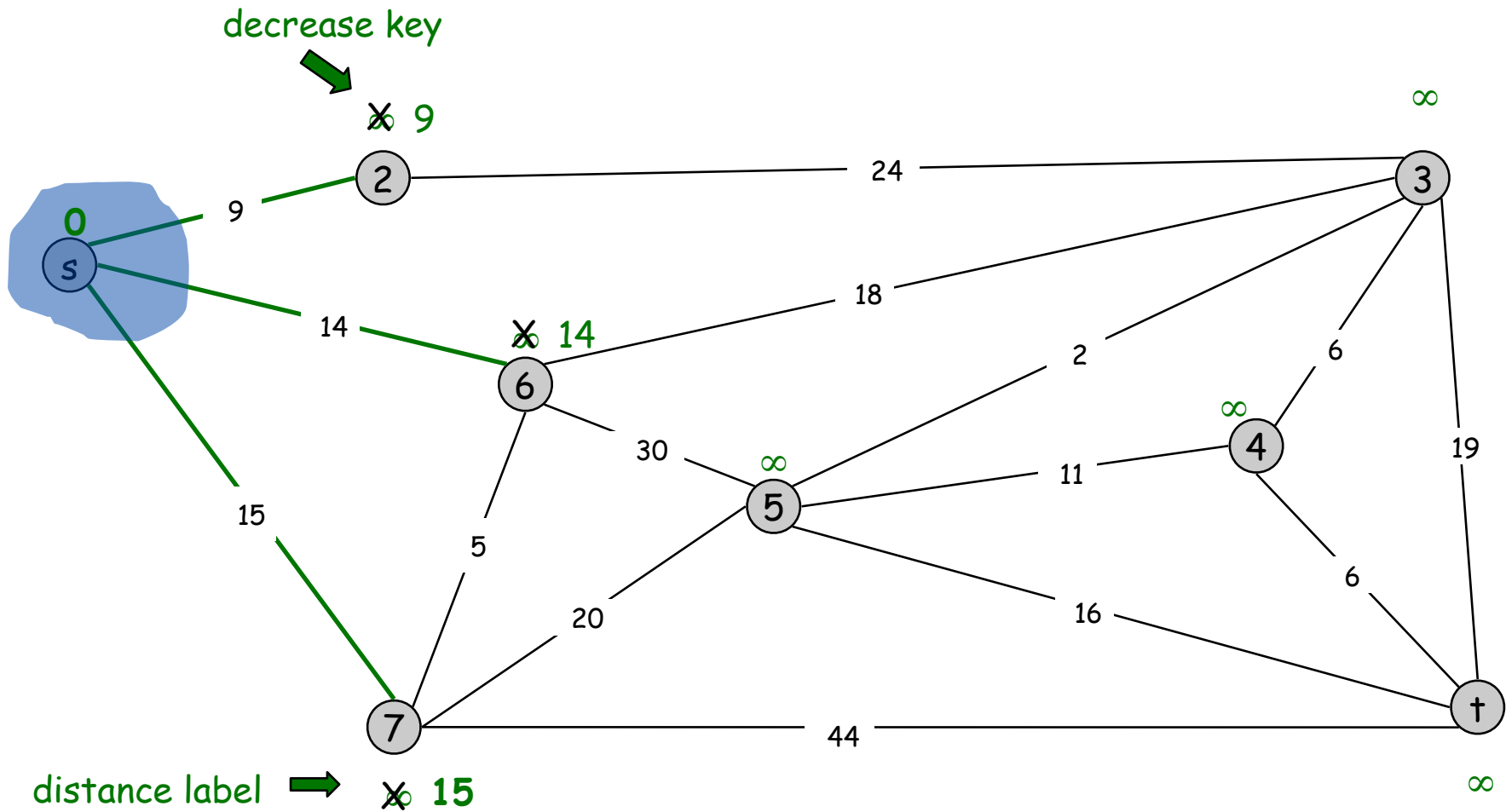
delmin



# Dijkstra's Shortest Path Algorithm

$S = \{s\}$

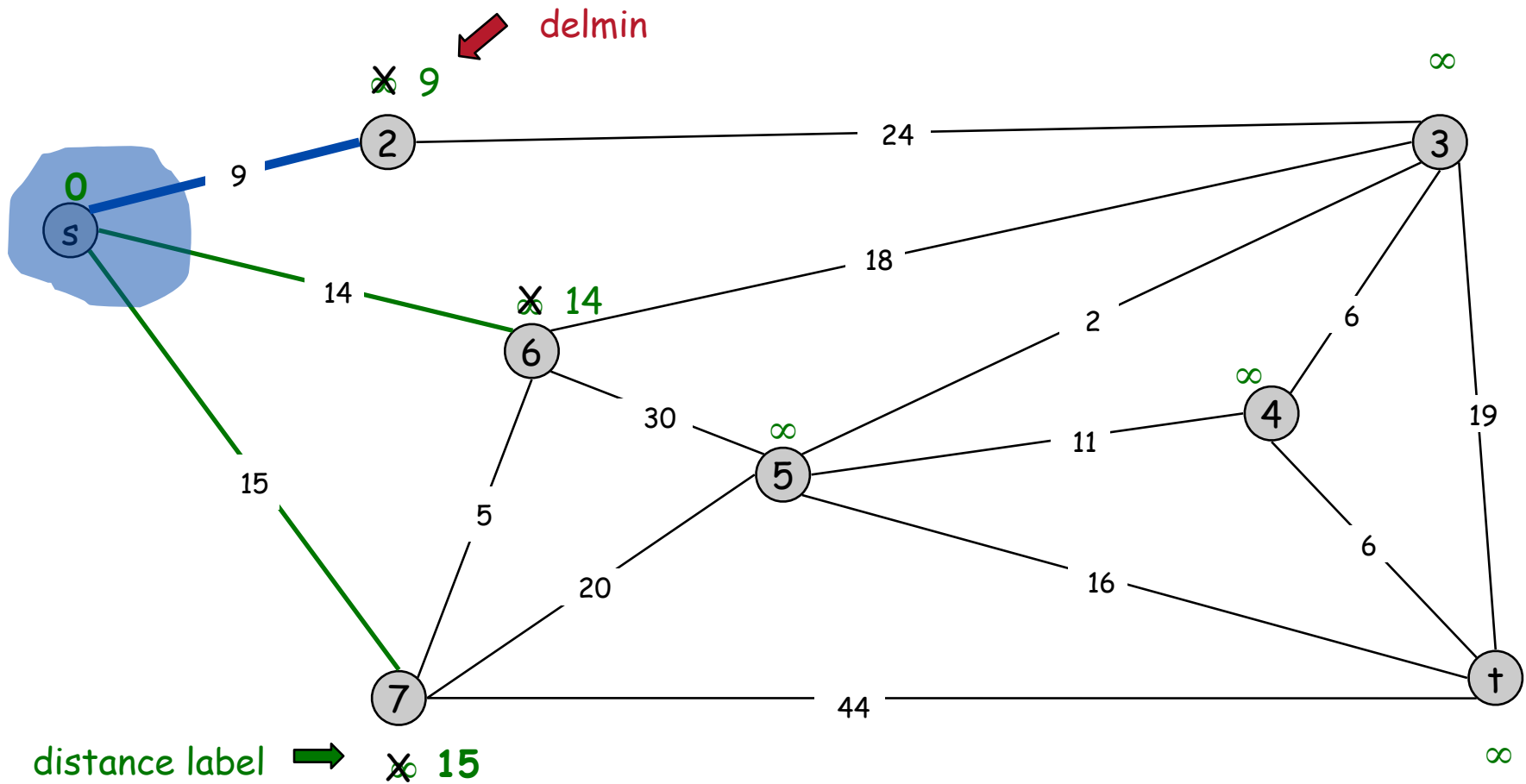
$PQ = \{2, 3, 4, 5, 6, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s\}$

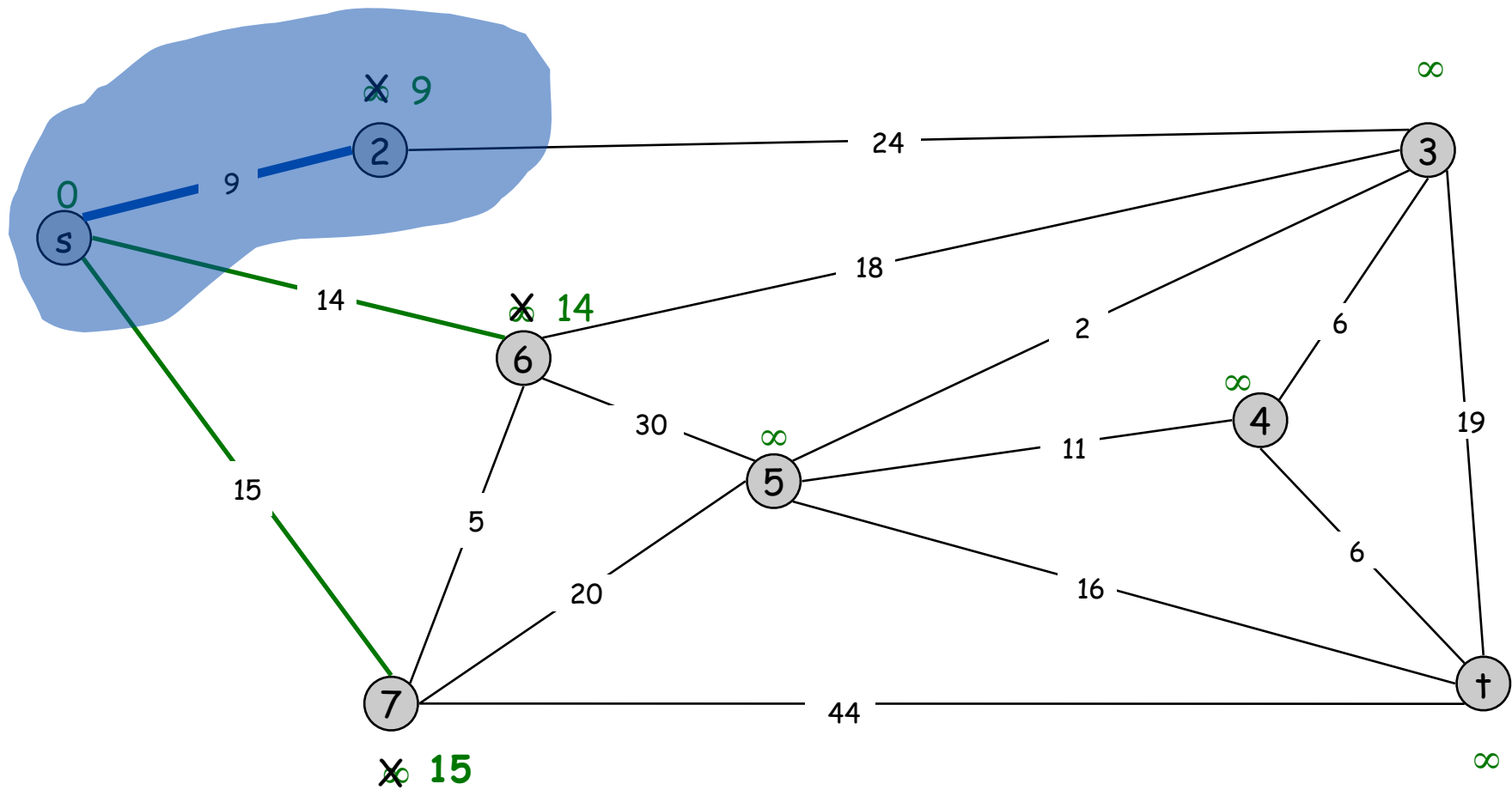
$PQ = \{2, 3, 4, 5, 6, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2\}$

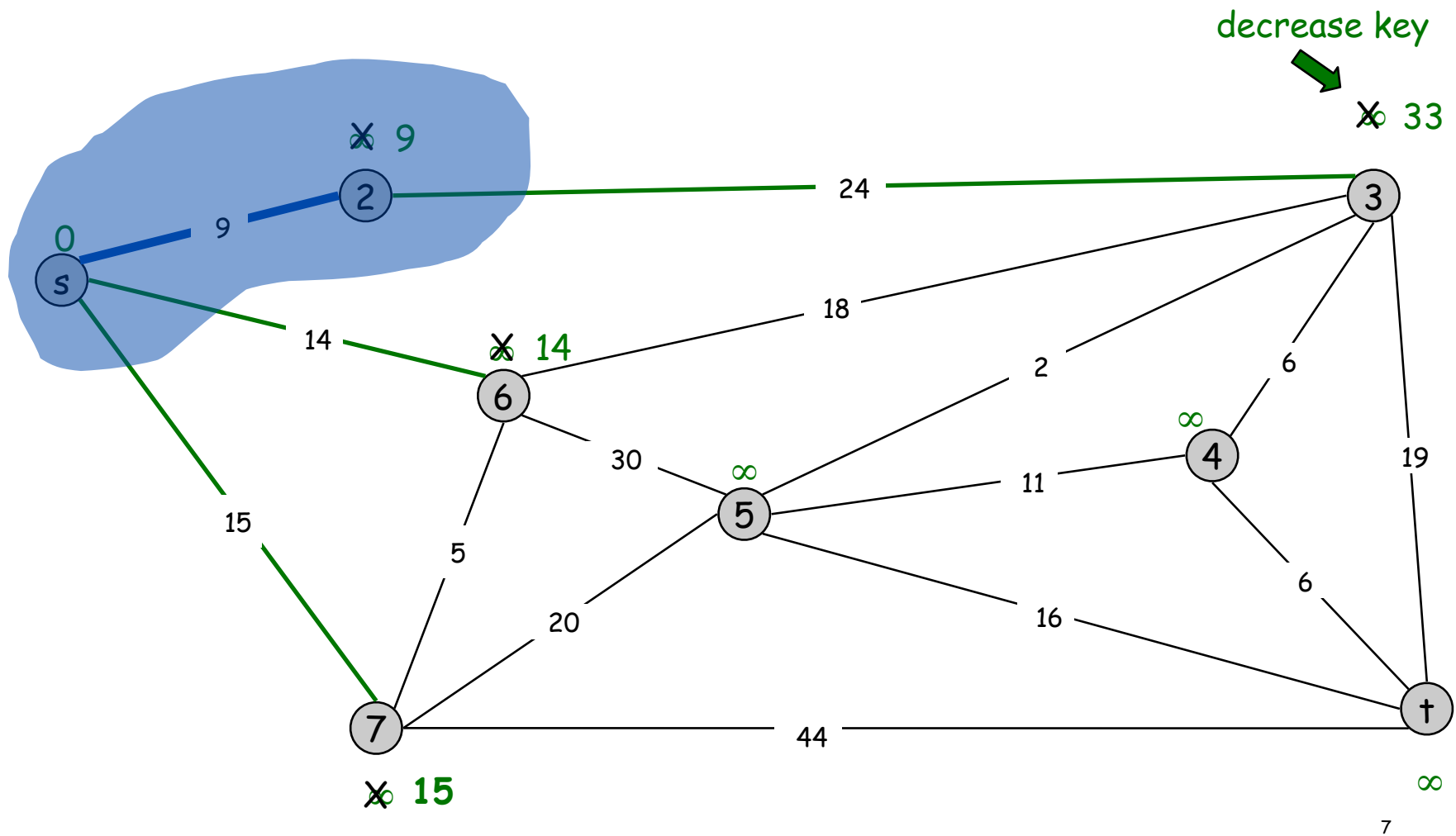
$PQ = \{6, 3, 4, 5, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2\}$

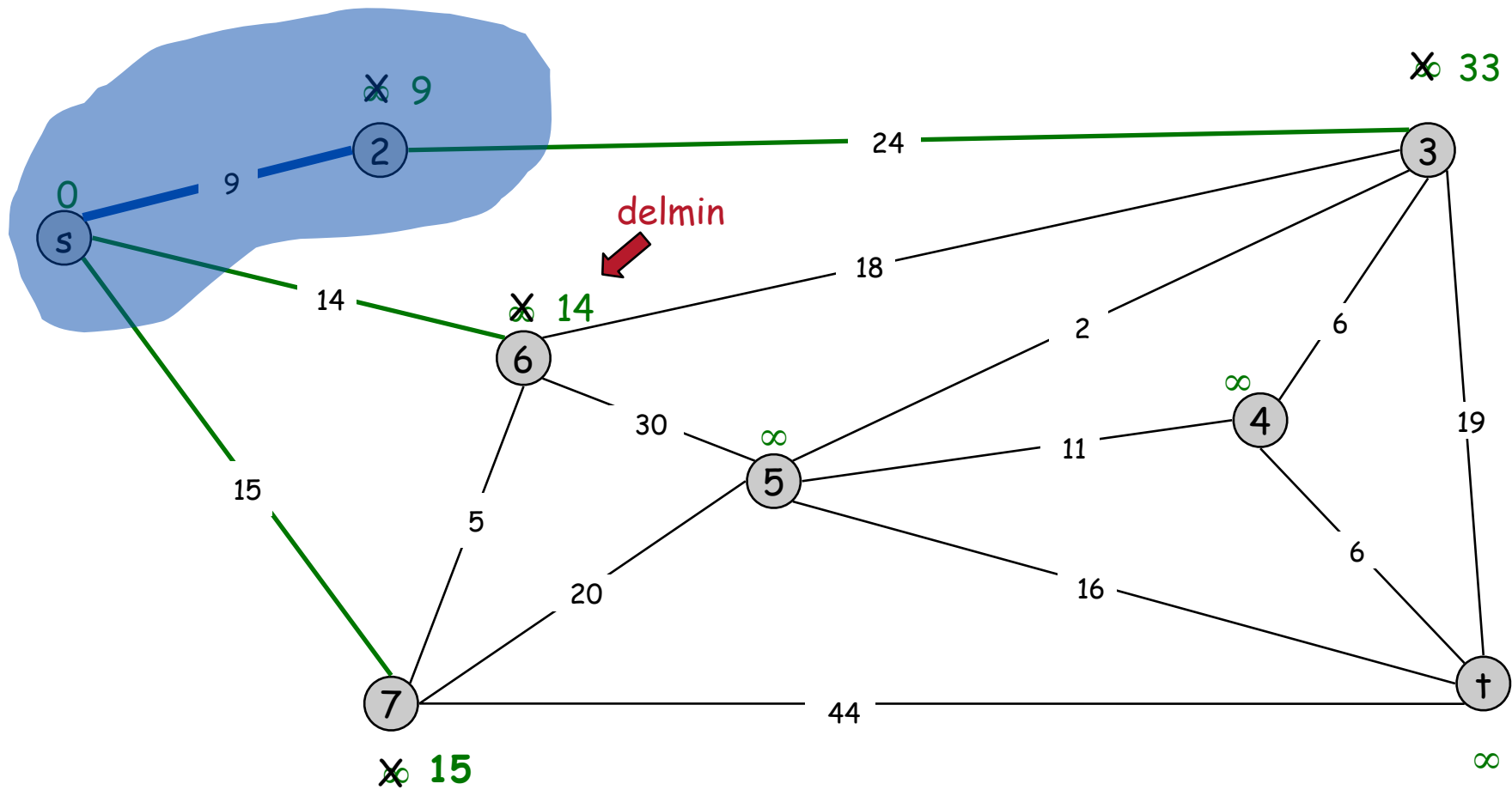
$PQ = \{6, 3, 4, 5, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2\}$

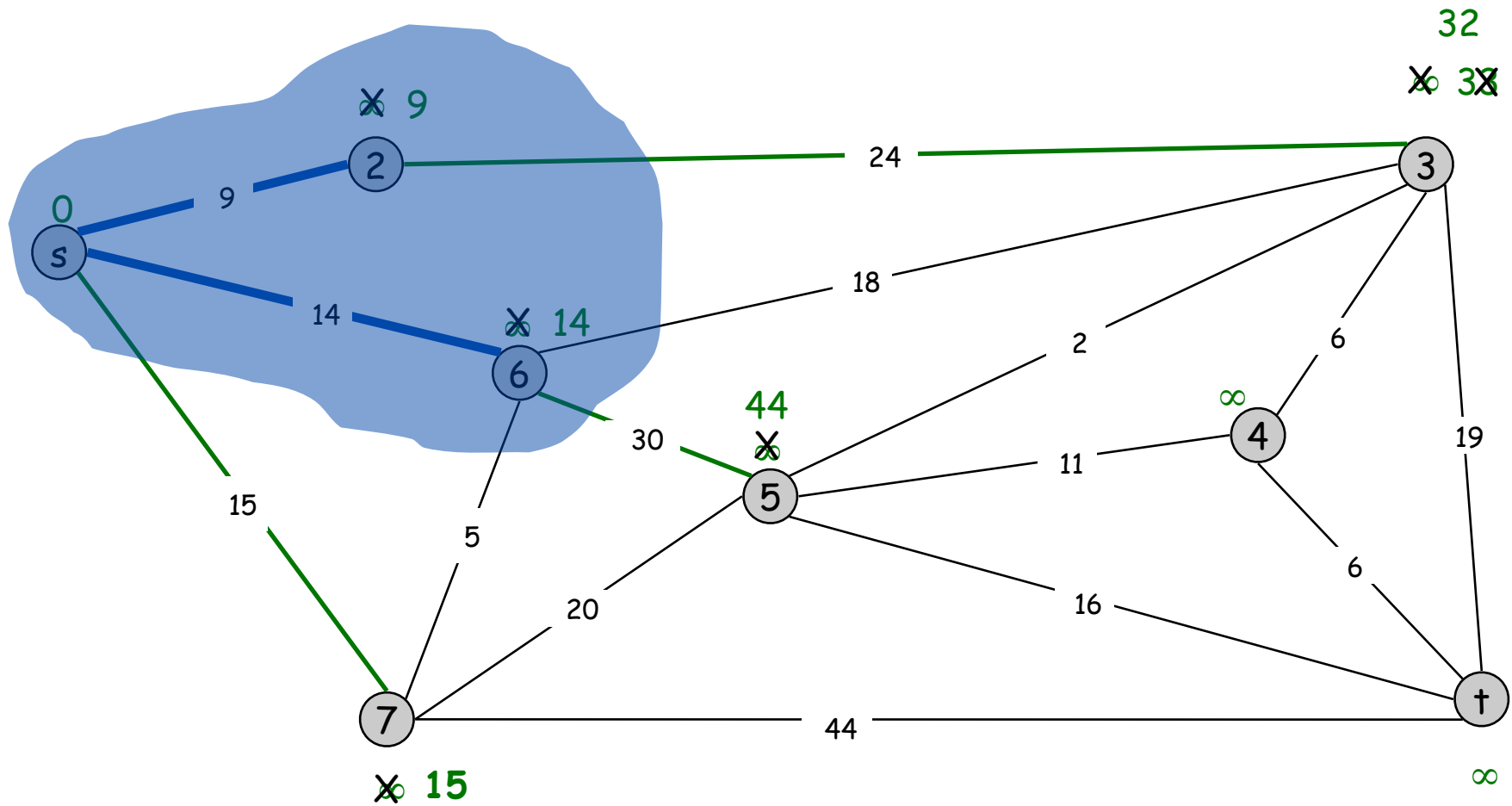
$PQ = \{6, 3, 4, 5, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 6\}$

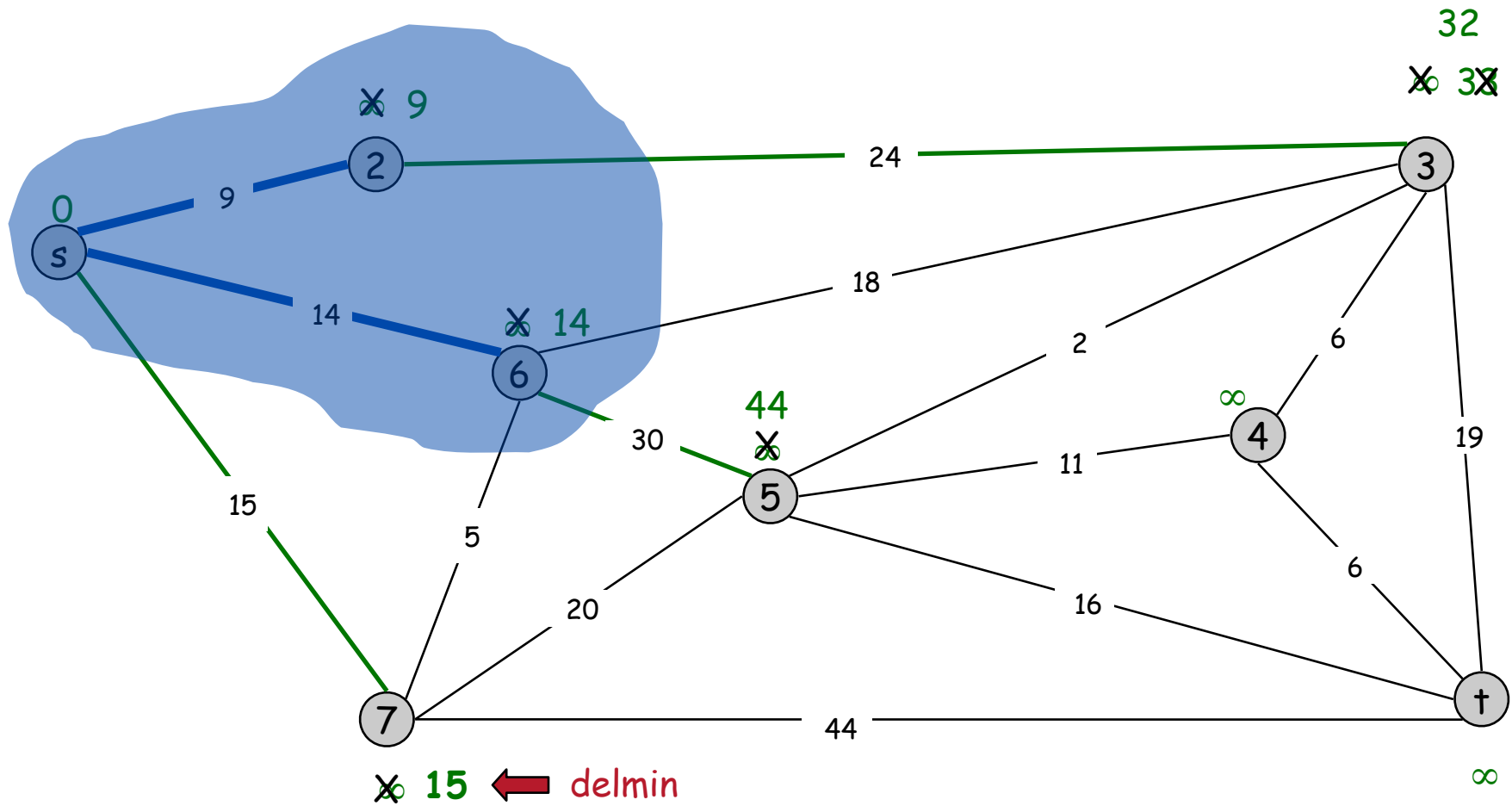
$PQ = \{3, 4, 5, 7, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 6\}$

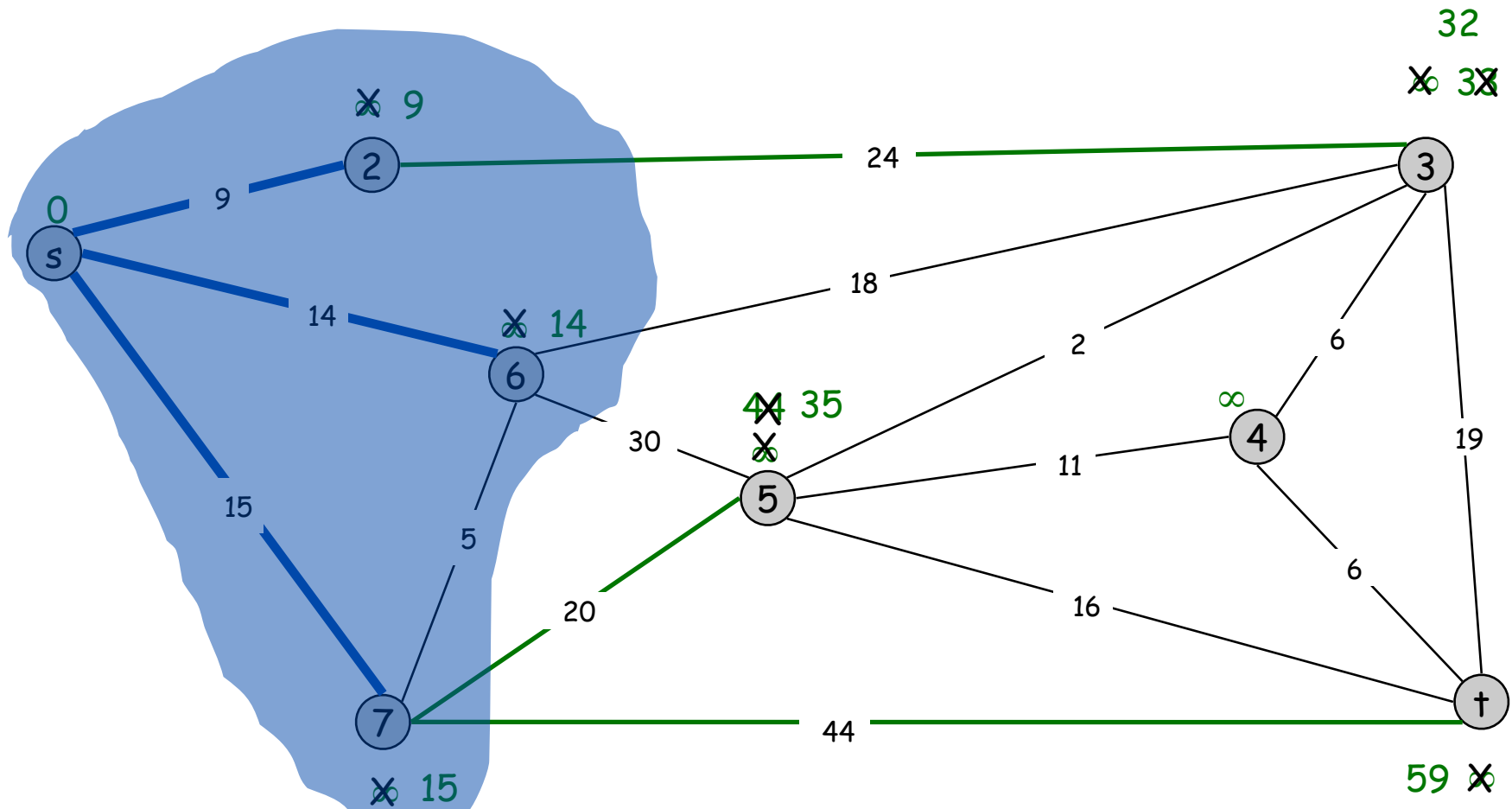
$PQ = \{7, 3, 4, 5, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 6, 7\}$

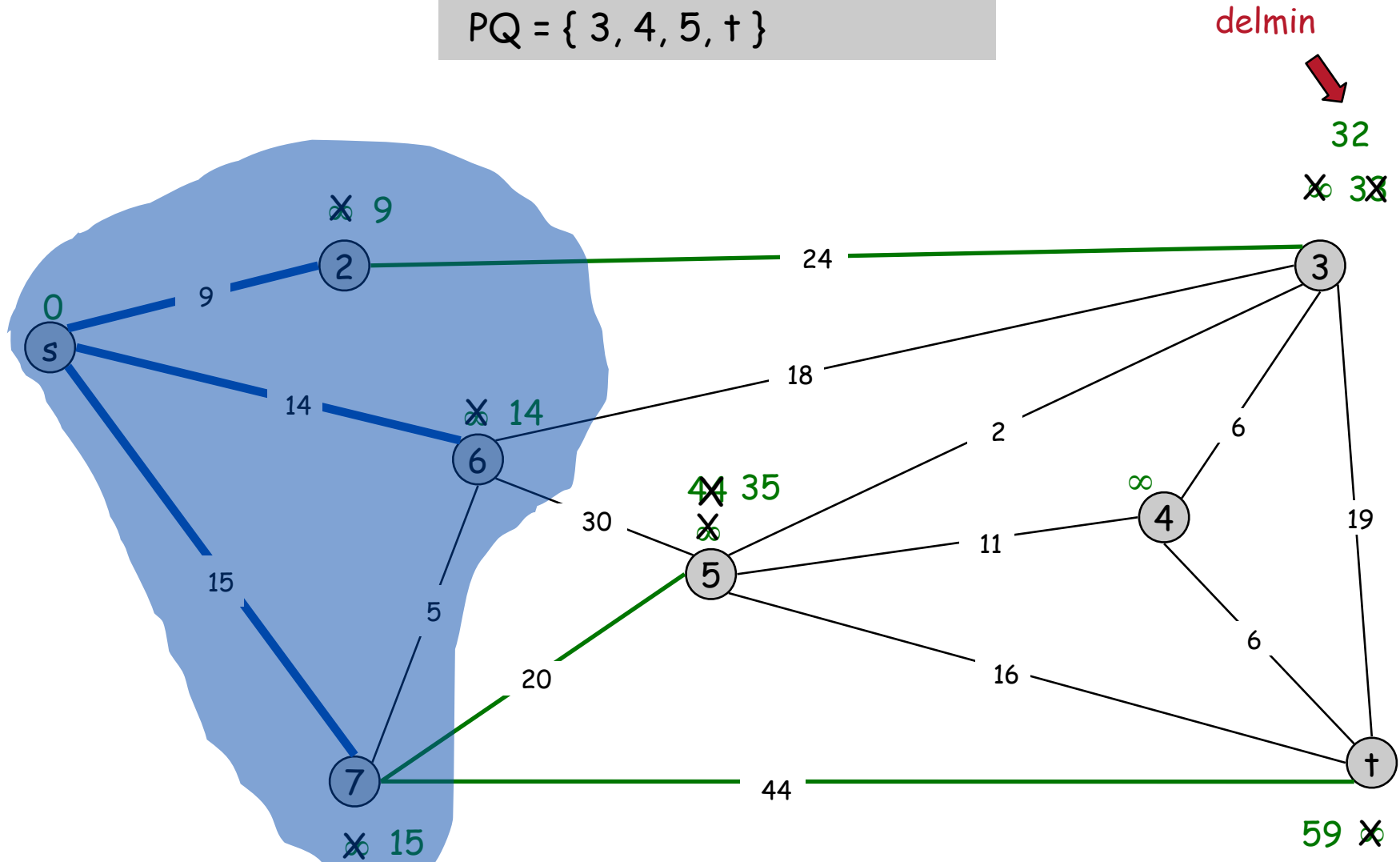
$PQ = \{3, 4, 5, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 6, 7\}$

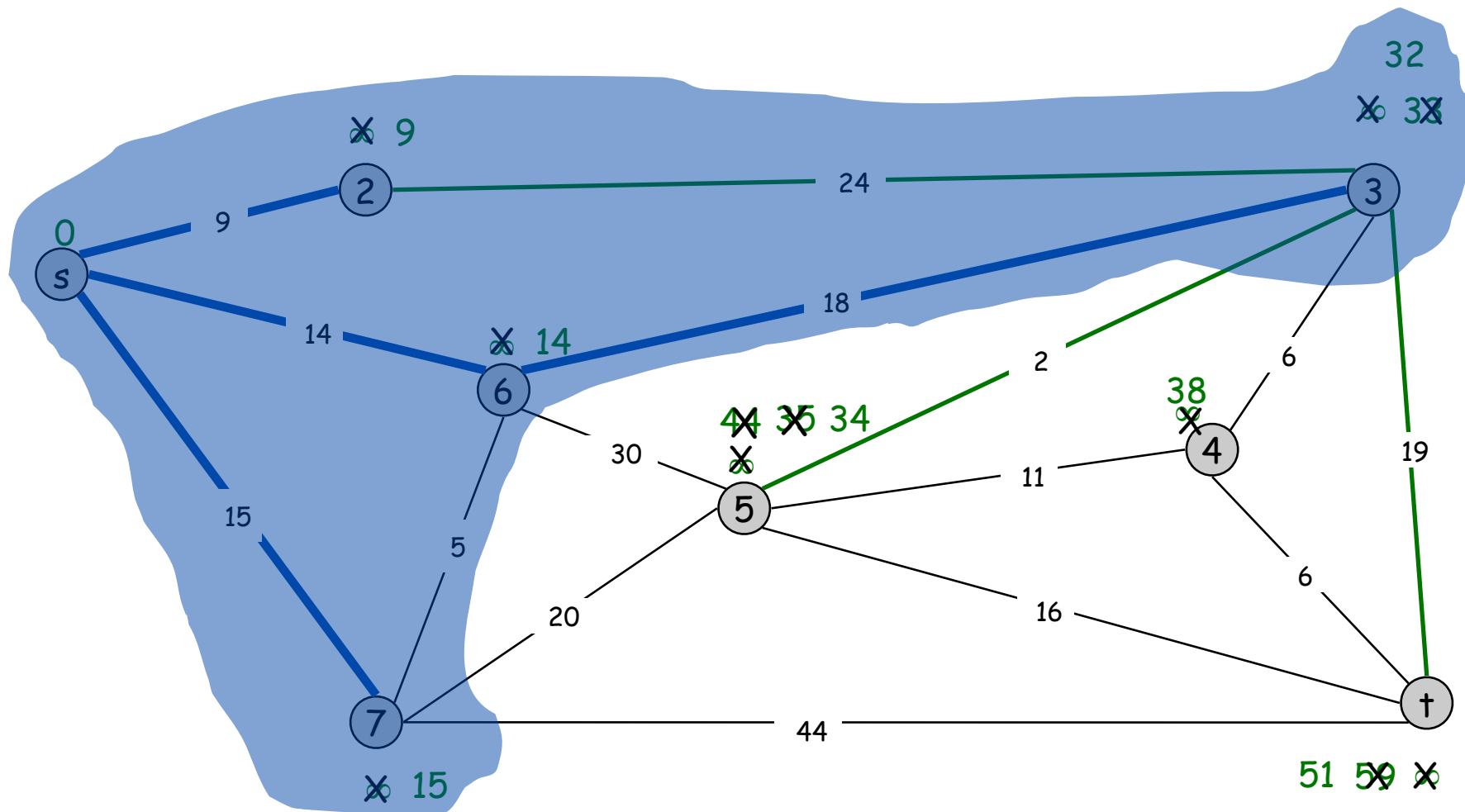
$PQ = \{3, 4, 5, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 6, 7\}$

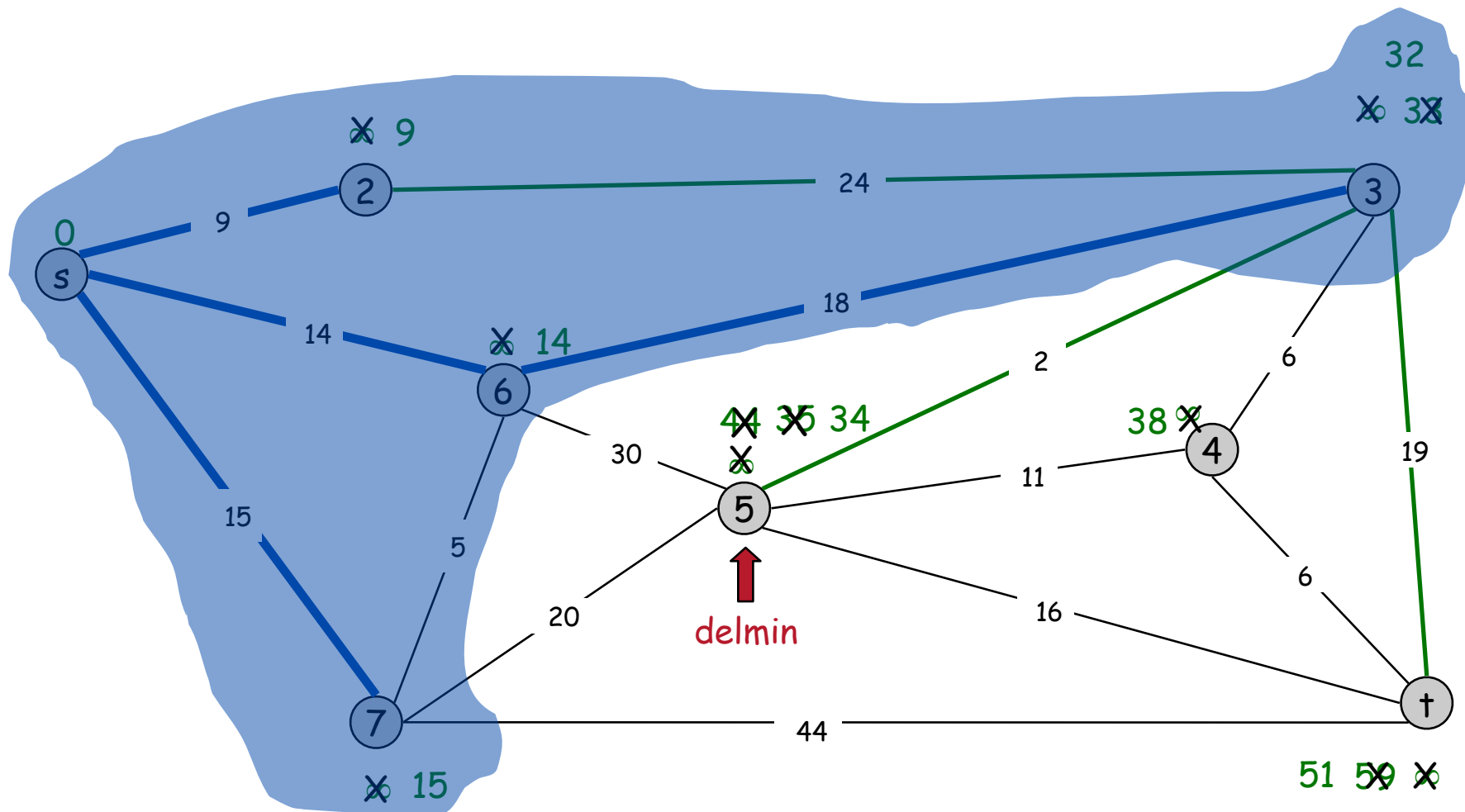
$PQ = \{5, 4, t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 6, 7\}$

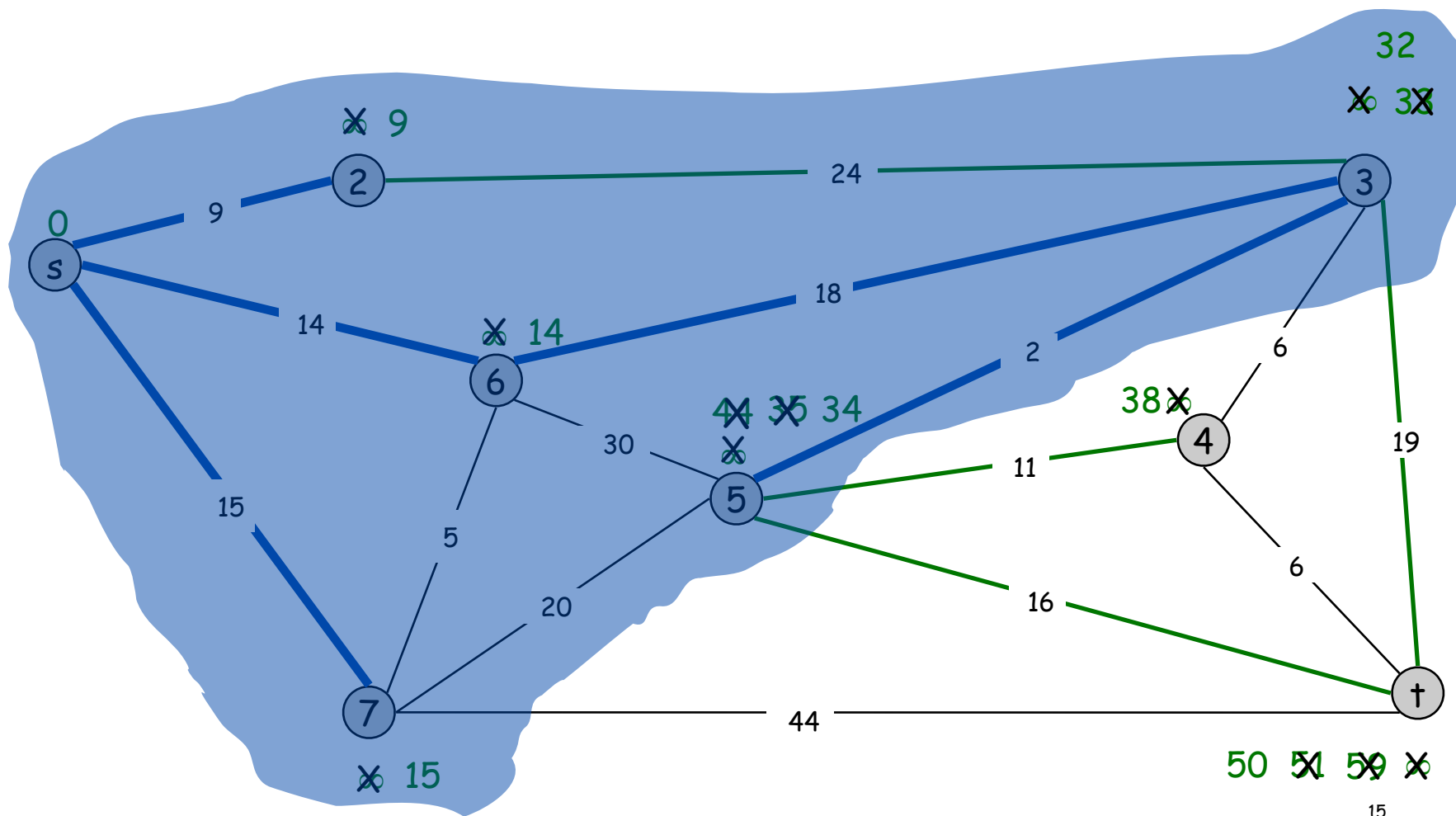
$PQ = \{5, 4, t\}$



# Dijkstra's Shortest Path Algorithm

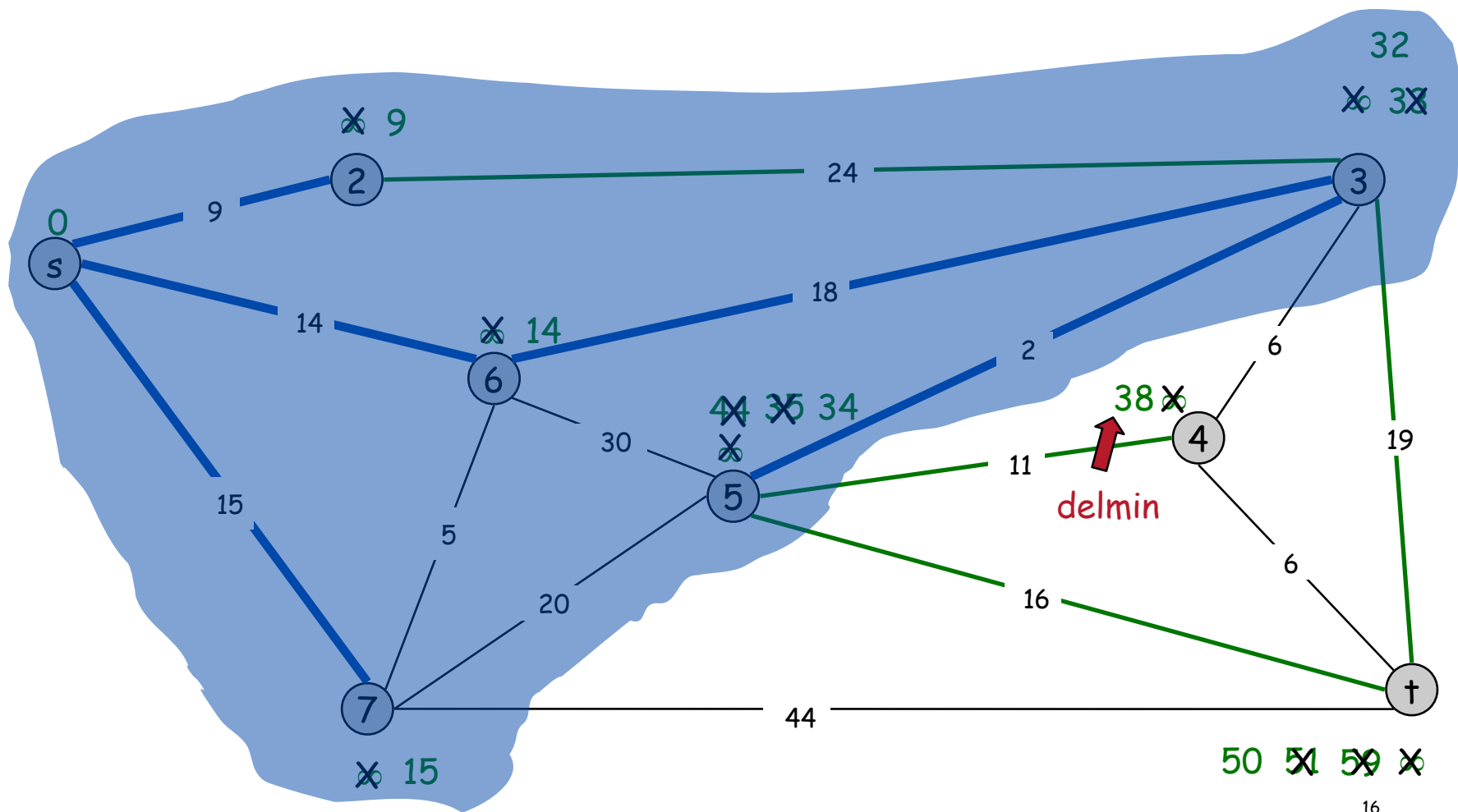
$S = \{s, 2, 3, 5, 6, 7\}$

$PQ = \{4, t\}$



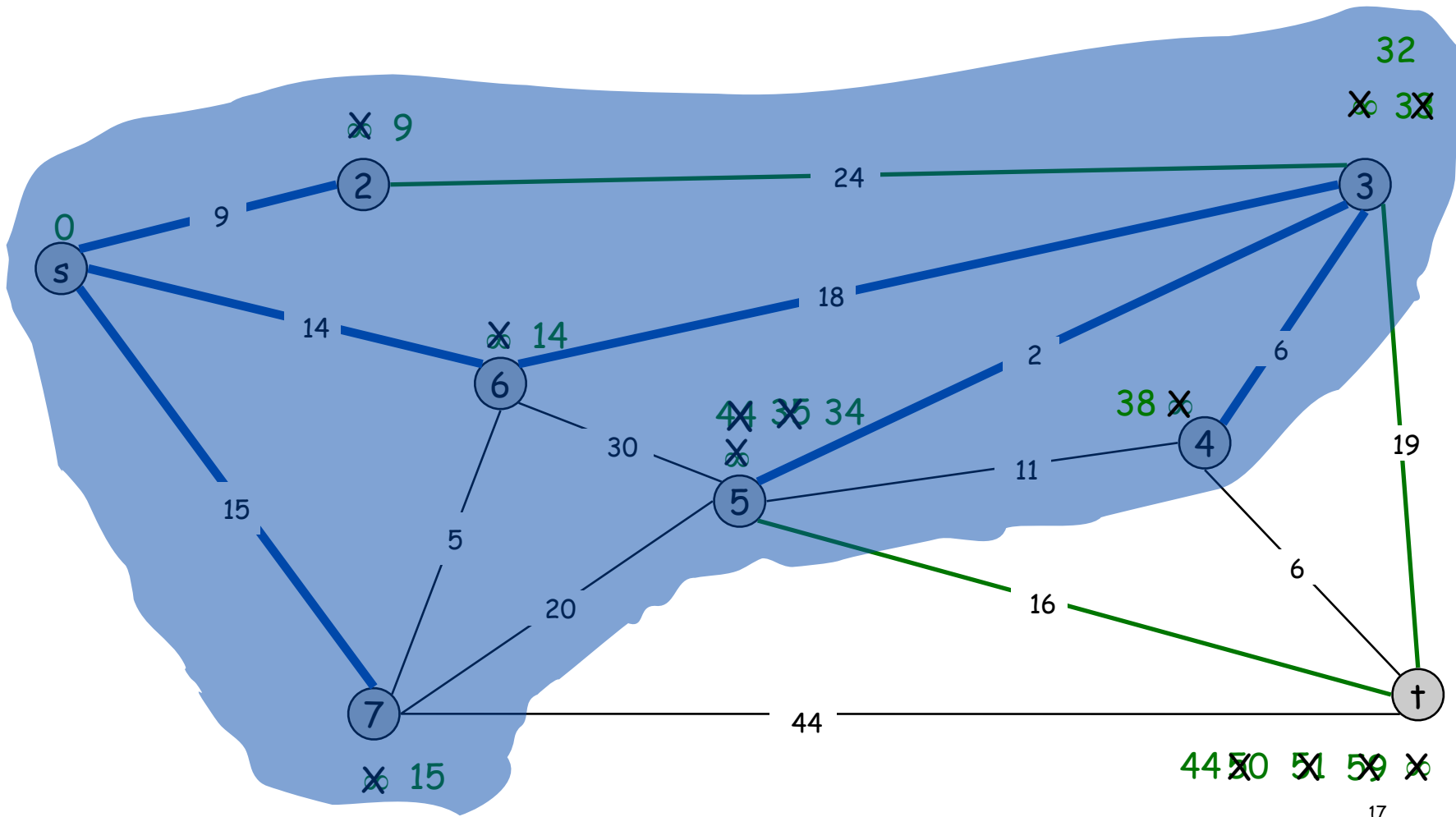
# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 5, 6, 7\}$   
 $PQ = \{4, t\}$



# Dijkstra's Shortest Path Algorithm

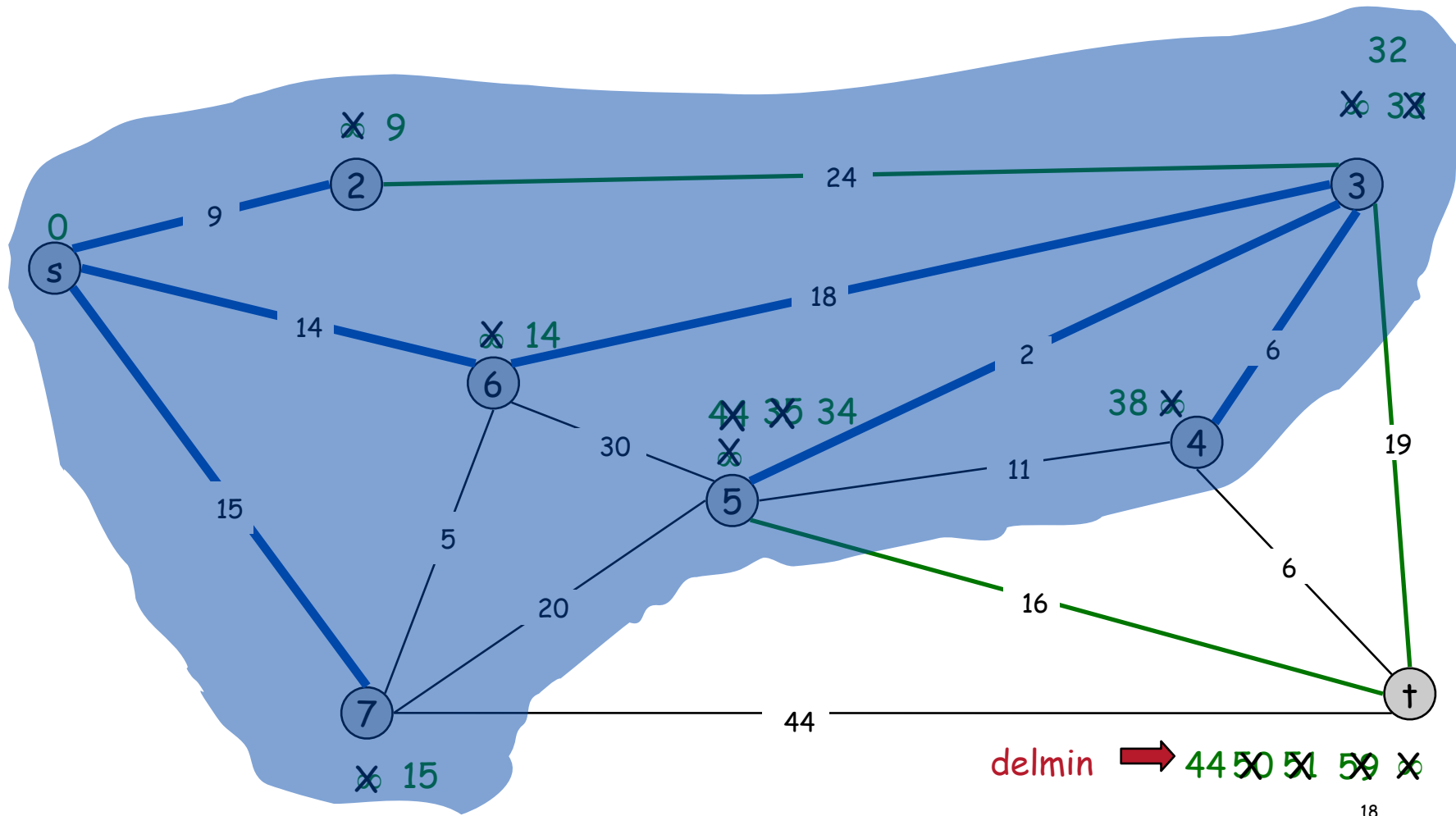
$S = \{s, 2, 3, 4, 5, 6, 7\}$   
 $PQ = \{t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 4, 5, 6, 7\}$

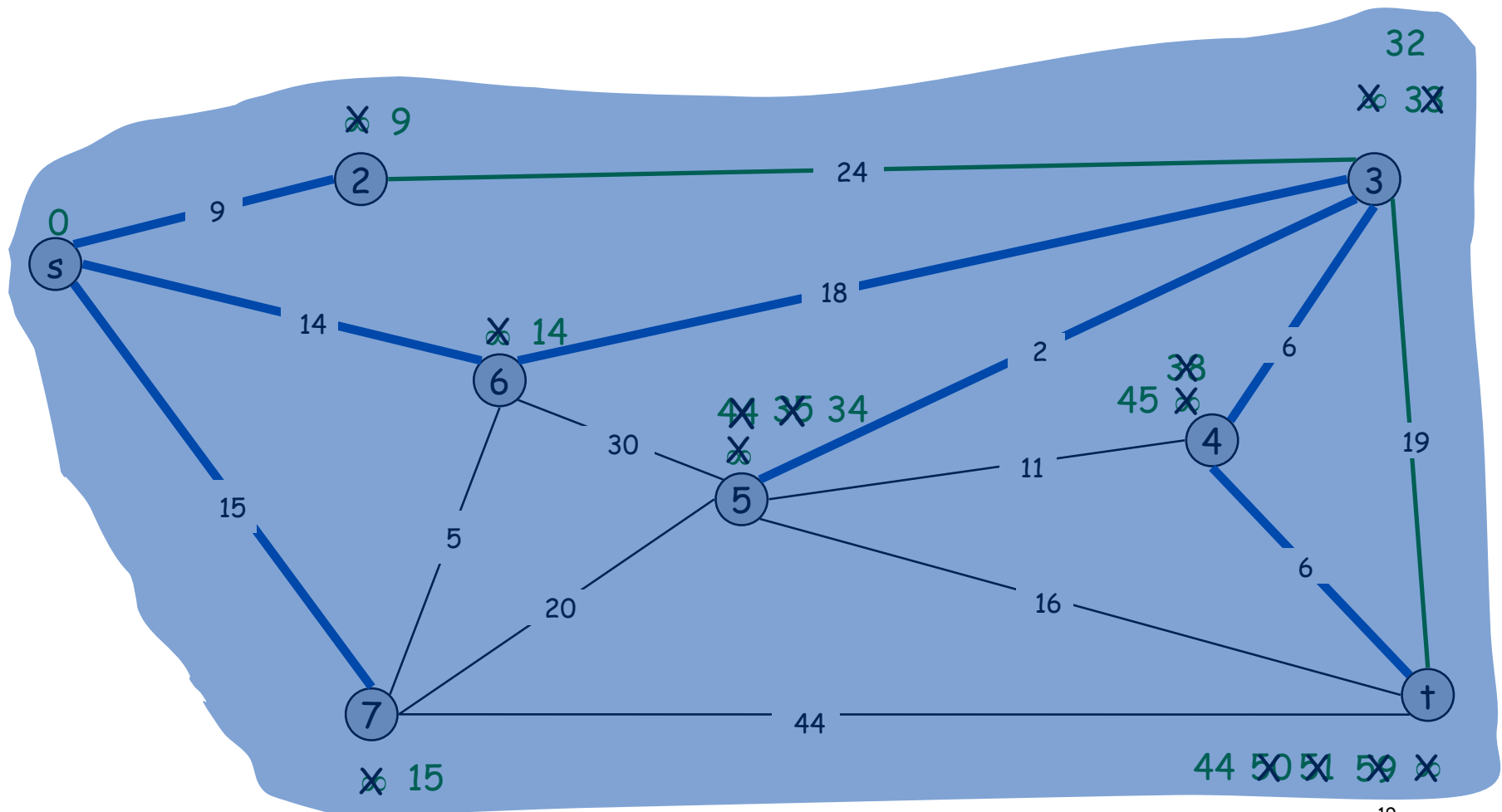
$PQ = \{t\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 4, 5, 6, 7, t\}$

$PQ = \{\}$



# Dijkstra's Shortest Path Algorithm

$S = \{s, 2, 3, 4, 5, 6, 7, t\}$   
 $PQ = \{\}$

