Dijkstra:

("A", "B", 3),

("A", "C", 1),

("B", "C", 7),

("B", "D", 5),

("B", "E", 1),

("C", "D", 2),

("D", "E", 7),

("E", "F", 2),

("D", "F", 3),

("C", "F", 1),

("C", "G", 3),

("A", "H", 3),

("C", "H", 3),

("A", "G", 2),

{'A': 0, 'B': 3, 'C': 1, 'D': 3, 'E': 4, 'F': 2, 'G': 2, 'H': 3}

{'A': 'A', 'B': 'A -> B', 'C': 'A -> C', 'D': 'A -> C -> D', 'E': 'A -> B -> E', 'F': 'A -> C -> F', 'G': 'A -> G', 'H': 'A -> H'}

Running time: 0.0 second

Kruskal:

("A", "B", 3),

("A", "C", 1),

("B", "C", 7),

("B", "D", 5),

("B", "E", 1),

("C", "D", 2),

("D", "E", 7),

("E", "F", 2),

("D", "F", 3),

("C", "F", 1),

("C", "G", 3),

("A", "H", 3),

("C", "H", 3),

("A", "G", 2),

{('A', 'B'): 3, ('A', 'C'): 1, ('A', 'H'): 3, ('A', 'G'): 2, ('B', 'C'): 7, ('B', 'D'): 5, ('B', 'E'): 1, ('C', 'D'): 2, ('C', 'F'): 1, ('C', 'G'): 3, ('C', 'H'): 3, ('D', 'E'): 7, ('D', 'F'): 3, ('E', 'F'): 2}

(12, [('A', 'C'), ('B', 'E'), ('C', 'F'), ('A', 'G'), ('C', 'D'), ('E', 'F'), ('A', 'H')])

Running time: 0.0010018348693847656 second

{('A', 'B'): 3, ('A', 'C'): 1, ('A', 'H'): 3, ('A', 'G'): 2, ('B', 'C'): 7, ('B', 'D'): 5, ('B', 'E'): 1, ('C', 'D'): 2, ('C', 'F'): 1, ('C', 'G'): 3, ('C', 'H'): 3, ('D', 'E'): 7, ('D', 'F'): 3, ('E', 'F'): 2}

(12, [('A', 'C'), ('B', 'E'), ('C', 'F'), ('A', 'G'), ('C', 'D'), ('E', 'F'), ('A', 'H')])

Running time: 0.006098508834838867 second

Prims:

("A", "B", 3),

("A", "C", 1),

("B", "C", 7),

("B", "D", 5),

("B", "E", 1),

("C", "D", 2),

("D", "E", 7),

("E", "F", 2),

("D", "F", 3),

("C", "F", 1),

("C", "G", 3),

("A", "H", 3),

("C", "H", 3),

("A", "G", 2),

{('A', 'B'): 3, ('A', 'C'): 1, ('A', 'H'): 3, ('A', 'G'): 2, ('B', 'C'): 7, ('B', 'D'): 5, ('B', 'E'): 1, ('C', 'D'): 2, ('C', 'F'): 1, ('C', 'G'): 3, ('C', 'H'): 3, ('D', 'E'): 7, ('D', 'F'): 3, ('E', 'F'): 2}

[('H', 'A', 3), ('A', 'C', 1), ('C', 'F', 1), ('C', 'D', 2), ('F', 'E', 2), ('E', 'B', 1), ('H', 'C', 3)]

Running time: 0.0013391971588134766 second

{('A', 'B'): 3, ('A', 'C'): 1, ('A', 'H'): 3, ('A', 'G'): 2, ('B', 'C'): 7, ('B', 'D'): 5, ('B', 'E'): 1, ('C', 'D'): 2, ('C', 'F'): 1, ('C', 'G'): 3, ('C', 'H'): 3, ('D', 'E'): 7, ('D', 'F'): 3, ('E', 'F'): 2}

[('H', 'A', 3), ('A', 'C', 1), ('C', 'F', 1), ('C', 'D', 2), ('F', 'E', 2), ('E', 'B', 1), ('H', 'C', 3)]

Running time: 0.0 second