

For the following 4-city TSP problems assume that the initial **BSSF** is infinite and that the city cost/distance matrix is

∞	7	3	12
3	∞	6	14
5	8	∞	6
9	3	5	∞

This is the same as the previous homework and the initial state should start with the same reduced cost matrix that you did for the previous homework for both problems below.

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Variant #1 Task

Task:

---	7	3	12
3	---	6	14
5	8	---	6
9	3	5	---

Variant #1 Solution

Step #1

---	4	0	8
0	---	3	10
0	3	---	0
6	0	2	---

Selected route with (3;4) part.

Step #2

---	4	0	---
0	---	3	---
---	---	---	---
6	0	---	---

Selected route with (4;2) part.

Step #3

---	---	0	---
0	---	3	---
---	---	---	---
---	---	---	---

Selected route with (1;3) part.

1 alternate candidate for branching: (2;1).

Optimal path:

City 1 -> City 3 -> City 4 -> City 2 -> City 1

The price is 15 units.

