Name and last name _____ Group _____

Excersice 9. Summarizing the four-step model.

For a generic city „N” divided into 3 zones and transportation network of 6 nodes, 9 arcs and one transit line, let’s:

1. Estimate OD matrix using proportional model.
2. Divide total OD matrix into transit and car matrices using given logit model.
3. Assign resulting matrices onto the road and transit networks.

Data:

1. Trip generations (motorized trips in the PM peak [trips/h]):

Zone	Production	Attraction
1	300	100
2	200	600
3	500	300
Total	1000	1000

2. Mode choice model:

$$u_{KI} = \frac{e^{-0.1 \cdot t_{Car}}}{e^{-0.1 \cdot t_{Car}} + e^{-0.1 \cdot t_{Transit}}},$$

   if there is a transit connection, otherwise $u_{KI} = 1$
3. Occupancy rate: 1,5 [person/vehicle]
4. All-or-nothing shortest path assignment,
5. Capacity is unlimited

Travel times [min]
Car (Transit)