

SOLUTIONS TO MIDTERM EXAM II QUESTIONS

1. (35 pts.)

	cost	benefit	benefit	cost	benefit
	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)
L1	5	2500	9	5	0.8326
L2	2.5	800	4	1	0.9552
L3	3.5	3000	8	3	0.1923
L4	4	1500	6	2	0.8326

$\wedge^2$	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)
L1	25	6250000	81	25	0.6932
L2	6.25	640000	16	1	0.9125
L3	12.25	9000000	64	9	0.0370
L4	16	2250000	36	4	0.6932
sqrt(sum)	7.7136	4259.1079	14.0357	6.2450	1.5284

Norm.	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)
L1	0.6482	0.5870	0.6412	0.8006	0.5448
L2	0.3241	0.1878	0.2850	0.1601	0.6250
L3	0.4537	0.7044	0.5700	0.4804	0.1258
L4	0.5186	0.3522	0.4275	0.3203	0.5448

Wtd. norm.	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)
L1	0.1945	0.1761	0.0962	0.1201	0.0545
L2	0.0972	0.0563	0.0427	0.0240	0.0625
L3	0.1361	0.2113	0.0855	0.0721	0.0126
L4	0.1556	0.1057	0.0641	0.0480	0.0545
a*	0.0972	0.2113	0.0962	0.0240	0.0625
a-	0.1945	0.0563	0.0427	0.1201	0.0126

S*	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)	sqrt(sum)
L1	0.0095	0.0012	0.0000	0.0092	0.0001	0.1414
L2	0.0000	0.0240	0.0029	0.0000	0.0000	0.1639
L3	0.0015	0.0000	0.0001	0.0023	0.0025	0.0802
L4	0.0034	0.0112	0.0010	0.0006	0.0001	0.1274

S-	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)	sqrt(sum)
L1	0.0000	0.0143	0.0029	0.0000	0.0018	0.1377
L2	0.0095	0.0000	0.0000	0.0092	0.0025	0.1455
L3	0.0034	0.0240	0.0018	0.0023	0.0000	0.1776
L4	0.0015	0.0024	0.0005	0.0052	0.0018	0.1065

	S*	S-	C*
L1	0.1414	0.1377	0.4933
L2	0.1639	0.1455	0.4703
L3	0.0802	0.1776	0.6890
L4	0.1274	0.1065	0.4553

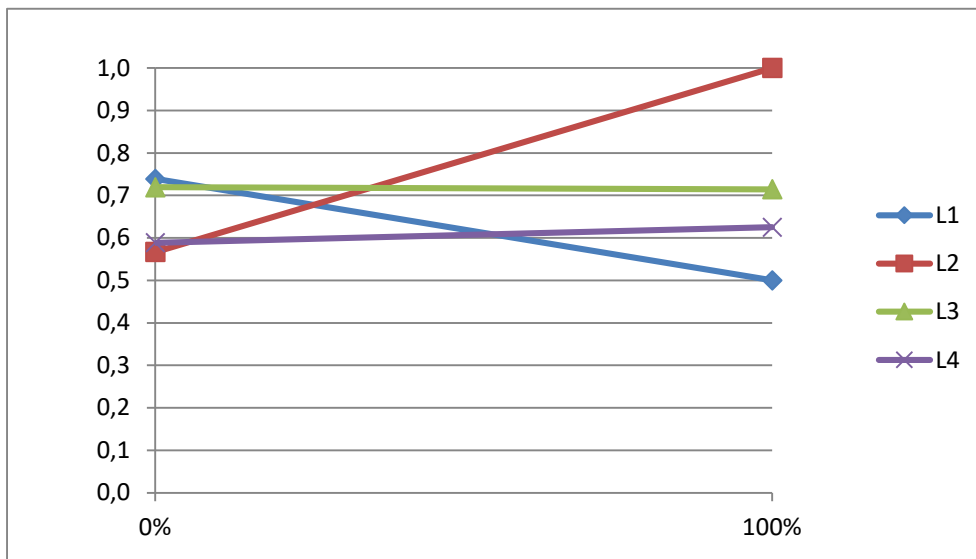
I recommend her to choose University Campus (L3)

2. (35 pts.)

	30%	30%	15%	15%	10%	
SAW	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)	Global Score
L1	0.5000	0.8333	1.0000	0.2000	0.8716	0.6672
L2	1.0000	0.2667	0.4444	1.0000	1.0000	0.6967
L3	0.7143	1.0000	0.8889	0.3333	0.2013	0.7177
L4	0.6250	0.5000	0.6667	0.5000	0.8716	0.5997

	0%	42.86%	21.43%	21.43%	14.29%	
	Monthly Rent (\$1000s)	Daily Foot Traffic	Proximity to Public Transit (1-10)	Competition Level	Avg. Income (\$1000s)	Global Score
L1	0.5000	0.8333	1.0000	0.2000	0.8716	0.7388
L2	1.0000	0.2667	0.4444	1.0000	1.0000	0.5667
L3	0.7143	1.0000	0.8889	0.3333	0.2013	0.7192
L4	0.6250	0.5000	0.6667	0.5000	0.8716	0.5888

	0%	100%
L1	0.7388	0.5000
L2	0.5667	1.0000
L3	0.7192	0.7143
L4	0.5888	0.6250



Choose Downtown Core (L1) if the importance of rent is less than or equal to 8.37%

Choose University Campus (L3) if the importance of rent is between 8.37% and 34.81%.

Choose Suburban Plaza (L2) if the importance of rent is greater than or equal to 34.81%

3.

a) (5 pts.)

Karpak: 2 votes, Ülengin: 9 votes, Tanyaş: 10 votes, Soysal: 8 votes

If the election is decided by a simple majority rule, Tanyaş will be the new CEO.

b) (10 pts.)

1st ballot → Tanyaş: 10 votes - Ülengin: 9 votes;

2nd ballot → Tanyaş: 12 votes - Ülengin: 17 votes

If the election is decided by the second ballot method, Ülengin will be the new CEO.

c) (15 pts.)

Karpak: $2 \times 3 + 19 \times 2 + 5 \times 1 = 49$

Ülengin: $9 \times 3 + 1 \times 2 + 10 \times 1 = 39$

Tanyaş: $10 \times 3 + 5 \times 2 + 6 \times 1 = 46$

Soysal: $8 \times 3 + 4 \times 2 + 8 \times 1 = 40$

If the election is decided by Borda's function, Karpak will be the new CEO.