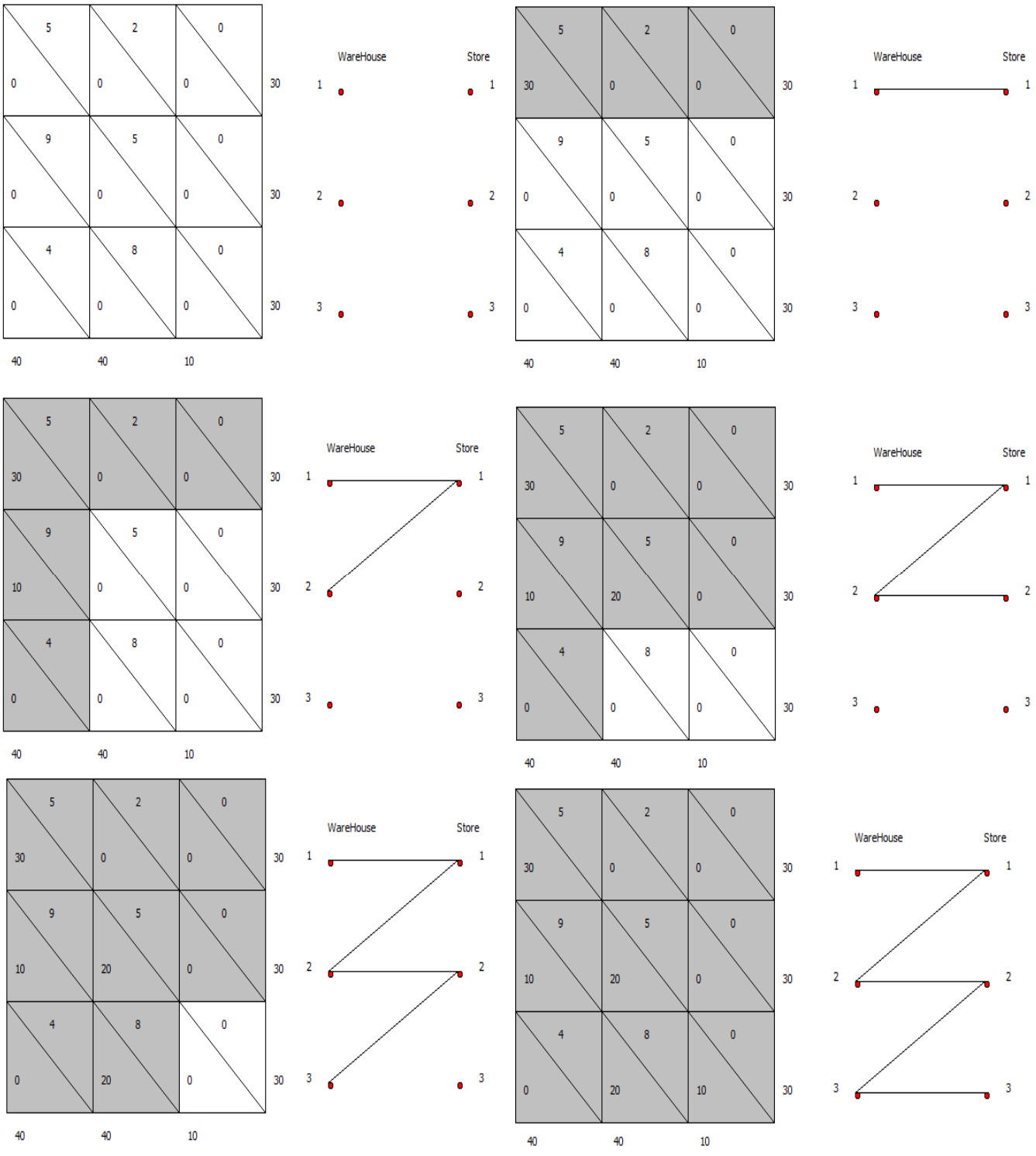
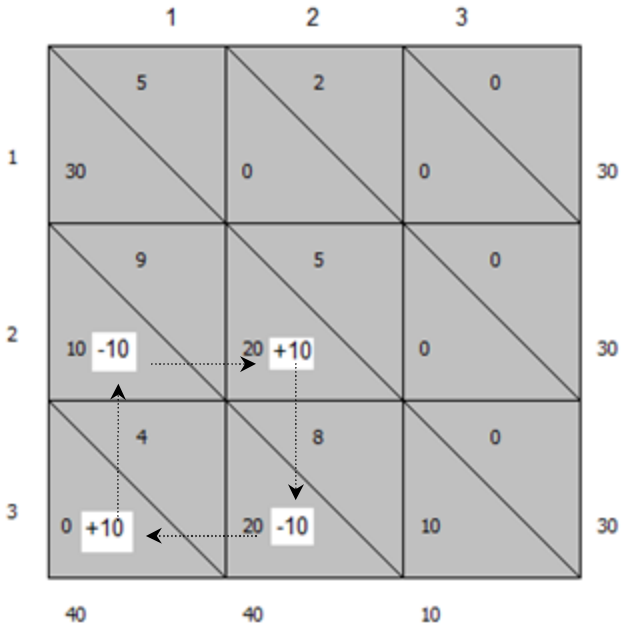
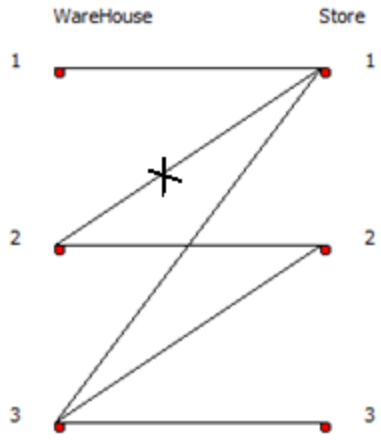


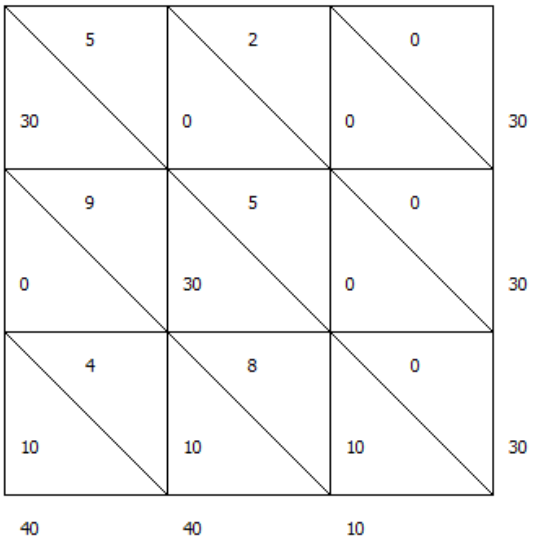
The total cost (by North-West Corner method) = $30\times5+10\times9+20\times5+20\times8+10\times0=500\$$

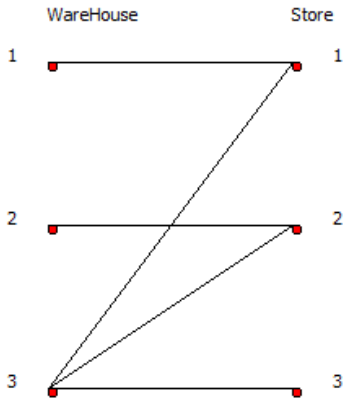
u1: 10 v1: 15 u2: 6 v2: 11 u3: 3 v3: 3	c12: 2 v2 - u1: 1 => decrease of $-1 c13: 0 v3 - u1: -7 => decrease of $-7 c23: 0 v3 - u2: -3 => decrease of $-3 c31: 4 v1 - u3: 12 => decrease of $8





Total cost reducing to 30 x 5 + 0 x 9 + 30 x 5 + 10 x 4 +10 x 8 = 420$

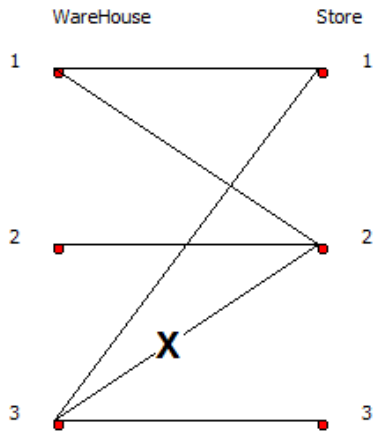




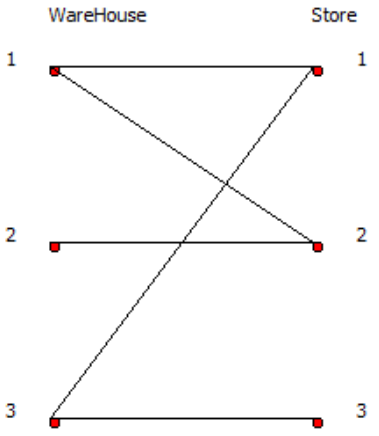
u1: 10 v1: 15
u2: 14 v2: 19
u3: 11 v3: 11

c12: 2 v2 - u1: 9 => decrease of $7
c13: 0 v3 - u1: 1 => decrease of $1
c21: 9 v1 - u2: 1 => decrease of $-8
c23: 0 v3 - u2: -3 => decrease of $-3

5	2	0	
30 -10	0 +10	0	30
9	5	0	
0	30	0	30
4	8	0	
10 +10	10 -10	10	30
40	40	10	



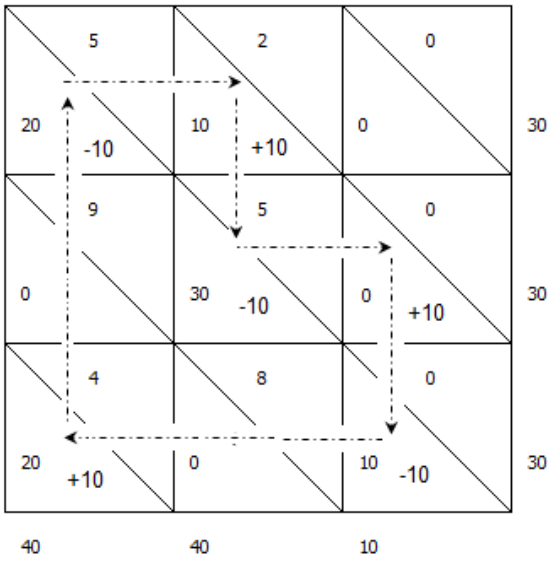
5	2	0	
20	10	0	30
9	5	0	
0	30	0	30
4	8	0	
20	0	10	30
40	40	10	

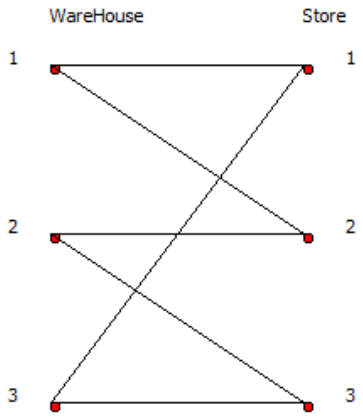


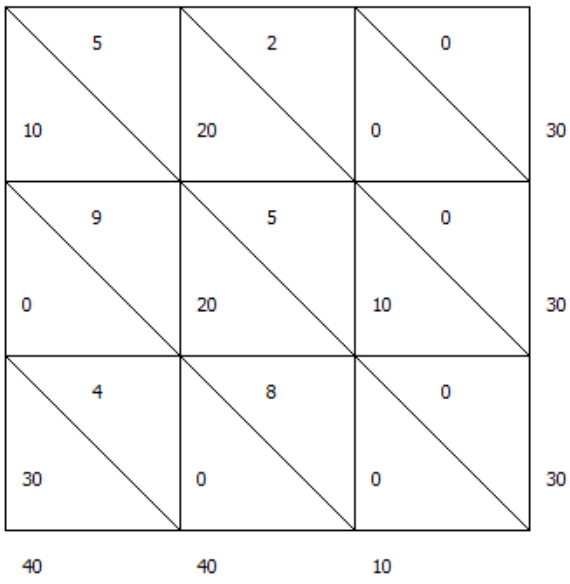
Total cost = 350

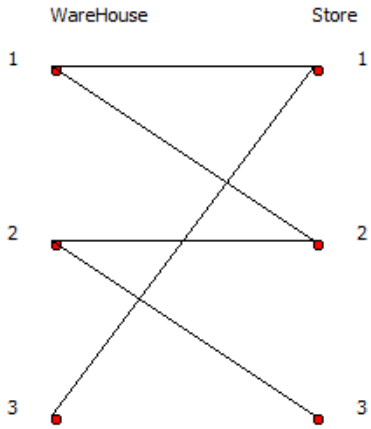
u1: 10 v1: 15
u2: 7 v2: 12
u3: 11 v3: 11

c13: 0 v3 - u1: 1 => decrease of $1
c21: 9 v1 - u2: 8 => decrease of $-1
c23: 0 v3 - u2: 4 => decrease of $4
c32: 8 v2 - u3: 1 => decrease of $-7









u1: 10 v1: 15
u2: 7 v2: 12
u3: 11 v3: 7

c13: 0 v3 - u1: -3 => decrease of $ -3
c21: 9 v1 - u2: 8 => decrease of $-1
c32: 8 v2 - u3: 1 => decrease of $-7
c33: 0 v3 - u3: - 4 => decrease of $ - 4

No positive reduction in the transportation cost => reached Optimal Solution!

Optimal cost = 310