Math 484. Midterm 3. November 20, 2003. 5 problems, 15 pts each. Return this page with solutions. Write your name here and on every page you use. Name

Solve transportation problems:

1.

1	2	3	1	2	3	1	2	3	0
0	3	2	0	1	2	1	2	1	30
2	1	0	1	2	1	2	1	1	12
1	1	1	2	2	2	2	2	1	8
2	3	4	5	1	2	3	14	16	

 $\min = 47.$

2.

1	2	3	1	2	3	1	2	3	10
0	3	2	0	1	2	1	2	1	20
2	1	0	1	2	1	2	1	1	12
1	1	1	2	2	2	2	2	1	8
2	3	4	5	1	19	0	0	16	

 $\min = 60.$

3.

	2	3	1	2	3	1	$\begin{vmatrix} 2 \end{vmatrix}$	3	10
0	3	2	0	1	2	1	$\begin{vmatrix} 2 \end{vmatrix}$	1	20
2	1	0	1	2	1	2	1	1	12
1	1	1	2	2	2	2	2	1	8
0	0	0	14	1	2	3	14	16	

 $\min = 43.$

Solve the job assignment problems (minimize):

4.

1	2	3	1	$\begin{vmatrix} 2 \end{vmatrix}$
3	1	2	1	0
0	0	3	2	1
0	0	2	1	1
1	3	3	1	0

min = 3.

5.

1	2	0	1	2
0	1	2	1	0
0	1	0	2	1
2	2	0	1	1
0	0	3	1	2

 $\min = 1.$