



- 6.20 The from-to material flow matrix for an eight-department facility is given in the table below. Construct a relationship diagram based on the material flow matrix, and construct a block layout using the graph-based method.

Dept.	Area Required (ft ²)
A	2800
B	2100
C	2600
D	400
E	600
F	400
G	2300
H	1800

- 6.21 Consider the layout of five equal-sized departments. The material flow matrix is given in the figure below.
- Develop the final adjacency graph using the graph-based procedure.
 - Develop a block layout based on the final adjacency graph obtained in part a.

	A	B	C	D	E
A	—	0	5	25	15
B	0	—	20	30	25
C	0	25	—	40	30
D	30	5	20	—	0
E	20	30	5	10	—

- 6.22 The material flow matrix for 10 departments is given below.

	A	B	C	D	E	F	G	H	I	J
A	—	0	12	0	132	16	0	220	20	24
B	0	—	176	0	216	0	144	128	0	0
C	0	0	—	0	0	184	0	0	28	0
D	212	136	240	—	36	0	236	0	164	0
E	0	0	140	0	—	0	192	0	0	160
F	0	180	0	188	108	—	248	228	0	0
G	172	0	156	0	0	0	—	112	224	152
H	0	0	32	40	204	0	0	—	0	0
I	0	168	0	0	104	156	0	148	—	200
J	0	124	196	120	0	116	0	108	0	—

The area requirements are

Dept.	Area (ft ²)
A	400
B	1000
C	2600
D	400
E	2400
F	1000
G	3600
H	1200
I	400
J	2400

- Determine a final adjacency graph using the graph-based procedure.
- Construct a block layout based on the adjacency graph in part a.