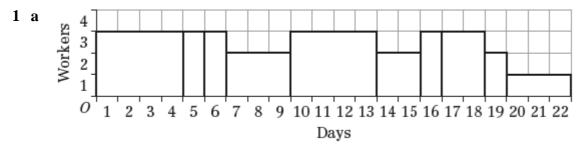
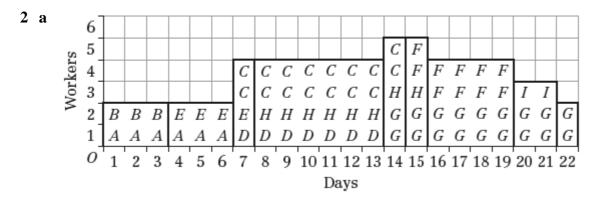
Decision Mathematics 1

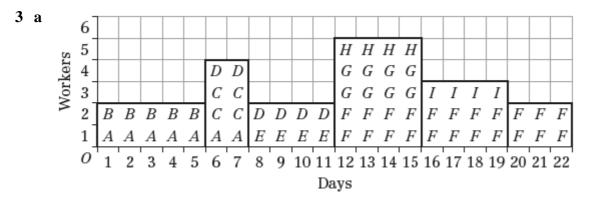
Critical path analysis 8H



b The resource histogram shows that 3 workers are required to complete the project in a time of 22 days if each activity starts at its early time.



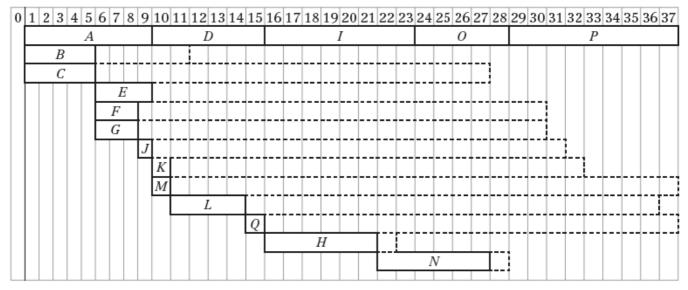
b The resource histogram shows that 5 workers are required to complete the project in a time of 22 days if each activity starts at its early time.



The resource histogram shows that 5 workers are needed.

b To reduce the number of workers to 4 we must consider delaying activity *H* until day 16, project does not need to be extended.

4 a



b If every activity starts at the earliest possible time then 6 workers are required.

	6										М																											
Workers	5						G	G	G	J	М												N	N														
	4	С	С	С	С	С	F	F	F	J	K						Η	Η	Η	Η	Η	Н	Ν	N	N	N	N	N										
	3	В	B	В	В	В	Ε	E	E	E	Κ	L	L	L	L	Q	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ν	N	Ν	Ν		Р	Р	Р	Р	Р	P	P	P	Р
	2	Α	A	A	Α	Α	Α	Α	A	Α	D	D	D	D	D	D	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	0	0	0	0	0	Р	Р	Р	Р	Р	Р	P	P	Р
	1	Α	A	A	Α	Α	Α	A	A	Α	D	D	D	D	D	D	Ι	Ι	Ι	Ι	Ι	Ι	Ι	Ι	0	0	0	0	0	Р	P	P	P	Р	P	P	P	Р
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37

- **c** Total float on activity *N* is only 1 hour, so delaying it by 2 hours would cause the project to be delayed.
- d 49 hours