# **Decision Maths 1**

Solution Bank



#### **Exercise 6G**

#### 1 a



 $<sup>\</sup>frac{\text{total duration}}{\text{critical time}} = \frac{64}{22} = 2.909...$  so lower bound = 3 workers.

- **b** 2 hours is less than the total float for activity B (3 hours).
- $\mathbf{c}$  J and H
- **d** Many possible solutions are available, such as 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

A	D	F	J
n			7
В		E	
C		G	
		0	
		Н	

4 workers are required.

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2 a



The Gantt chart for this activity network is:



#### **b** Many possible solutions are available, such as

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
_	_				_			_						_			_		_	_	_			_		_			_	_	_
				A									C						F									J	r i		
													_				_				_			_							_
				B				Ε					L	)					6	ř					K						
																															_
															Η																

3 workers are needed to complete the project in the critical time.

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Since only two workers are available for this project the scheduling diagram is:

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
		Ŀ	1		C				F	7							Ι						J		
	1	3			Ε				D						$G_{-}$				1	F					

The minimum time to complete the project using two workers is 25 days.