

## Exercise 6D

1

| Activity | Total float       |
|----------|-------------------|
| <i>A</i> | 0                 |
| <i>B</i> | $10 - 3 - 0 = 7$  |
| <i>C</i> | $15 - 8 - 6 = 1$  |
| <i>D</i> | 0                 |
| <i>E</i> | $14 - 4 - 3 = 7$  |
| <i>F</i> | $20 - 5 - 14 = 1$ |
| <i>G</i> | 0                 |
| <i>H</i> | $22 - 8 - 7 = 7$  |
| <i>I</i> | $28 - 8 - 19 = 1$ |
| <i>J</i> | $22 - 2 - 19 = 1$ |
| <i>K</i> | $29 - 1 - 27 = 1$ |
| <i>L</i> | 0                 |

2 a  $a = 10$ ,  $b = 19$ ,  $x = 19 - 10 = 9$   
 Total float at  $Q = 3 = 15 - y - a$   
 $y = 15 - 3 - 10$   
 $y = 2$

b Minimum value of  $c = 10 + 2 = 12$

c Maximum value of total float of  $R = 19 - 4 - 12 = 3$

- 3 a The value of  $y$  is an early event time and calculated starting from 0 at the source node and working towards the sink node.  
 $y = 6 + 4 = 10$

The late event times are calculated starting from the sink node and working backwards towards the source node.

$$x = 21 - 3 - 3 - 12 = 3$$

$$z = 21 - 4 = 17$$

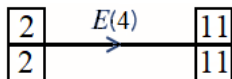
- b The critical path is *ADIL*.

(*ADHK* is not a critical path as the activity *H* has an early event time of 3 and a late event time of  $z = 17$ .)

Critical activities have to have early and event times equal.)

The critical activities are *A*, *D*, *I* and *L*.

c



$$\text{Total float} = 11 - 4 - 2 = 5$$