

The earliest time that each event may occur is listed below:

Event 0 : 0 unit time  
Event 1 : 6 unit time  
Event 2 : 4 unit time  
Event 3 : 5 unit time  
Event 4 : 7 unit time  
Event 5 : 7 unit time  
Event 6 : 16 unit time  
Event 7 : 14 unit time  
Event 8 : 18 unit time

The latest time that each event may occur is listed below:

Event 0 : 0 unit time  
Event 1 : 6 unit time  
Event 2 : 6 unit time  
Event 3 : 8 unit time  
Event 4 : 7 unit time  
Event 5 : 10 unit time  
Event 6 : 16 unit time  
Event 7 : 14 unit time  
Event 8 : 18 unit time

Following are the critical events:

Event 0  
Event 1  
Event 4  
Event 6  
Event 7  
Event 8

The following is the list of critical activities for each critical path:

a1 a4 a7 a10

a1 a4 a8 a11

The longest path in this activity network has a duration of:  
18 unit time

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The earliest time that each event may occur is listed below:

Event 0 : 0 unit time  
Event 1 : 6 unit time  
Event 2 : 4 unit time  
Event 3 : 5 unit time  
Event 4 : 7 unit time  
Event 5 : 7 unit time  
Event 6 : 16 unit time  
Event 7 : 14 unit time  
Event 8 : 18 unit time  
Event 9 : 19 unit time  
Event 10 : 19 unit time  
Event 11 : 20 unit time

The latest time that each event may occur is listed below:

Event 0 : 0 unit time  
Event 1 : 6 unit time

Event 2 : 6 unit time  
Event 3 : 8 unit time  
Event 4 : 7 unit time  
Event 5 : 10 unit time  
Event 6 : 16 unit time  
Event 7 : 14 unit time  
Event 8 : 18 unit time  
Event 9 : 19 unit time  
Event 10 : 19 unit time  
Event 11 : 20 unit time

Following are the critical events:

Event 0  
Event 1  
Event 4  
Event 6  
Event 7  
Event 8  
Event 9  
Event 10  
Event 11

The following is the list of critical activities for each critical path:

a1 a4 a7 a10 a12 a14  
a1 a4 a7 a10 a13 a15  
a1 a4 a8 a11 a12 a14  
a1 a4 a8 a11 a13 a15

The longest path in this activity network has a duration of:  
20 unit time

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Invalid input: Network has a cycle!