The following activities form the critical path: **<<enter critical path>>**

The slack for each activity is:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Activity** | **ES** | **EF** | **LS** | **LF** | **Slack** |
| a | **##** | **##** | **##** | **##** | **##** |
| b | **##** | **##** | **##** | **##** | **##** |
| c | **##** | **##** | **##** | **##** | **##** |
| d | **##** | **##** | **##** | **##** | **##** |
| e | **##** | **##** | **##** | **##** | **##** |
| f | **##** | **##** | **##** | **##** | **##** |
| g | **##** | **##** | **##** | **##** | **##** |
| h | **##** | **##** | **##** | **##** | **##** |
| i | **##** | **##** | **##** | **##** | **##** |
| j | **##** | **##** | **##** | **##** | **##** |
| k | **##** | **##** | **##** | **##** | **##** |
| l | **##** | **##** | **##** | **##** | **##** |

The project completion time is: **## days**

You were recently assigned to manage a project for your company. You were given information regarding the various activities in the project. In addition, you have asked your team to estimate the amount of time that they would expect each of the activities to take. Their responses are shown in the following table.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Optimistic** | **Most Likely** | **Pessimistic** |  | **Variance** | **Variance** | **Variance** |
| **Activity** | ***a*** | ***Most Likely*** | ***b*** | ***TE*** | **((b-a)/6)2** | **((b-a)/3.29)2** | **((b-a)/2.6)2** |
| a | 5 | 6 | 9 | **##.##** | **##.##** | **##.##** | **##.##** |
| b | 4 | 4 | 6 | **##.##** | **##.##** | **##.##** | **##.##** |
| c | 7 | 9 | 15 | **##.##** | **##.##** | **##.##** | **##.##** |
| d | 6 | 6 | 6 | **##.##** | **##.##** | **##.##** | **##.##** |
| e | 4 | 5 | 7 | **##.##** | **##.##** | **##.##** | **##.##** |
| f | 12 | 16 | 17 | **##.##** | **##.##** | **##.##** | **##.##** |
| g | 8 | 12 | 20 | **##.##** | **##.##** | **##.##** | **##.##** |
| h | 7 | 9 | 16 | **##.##** | **##.##** | **##.##** | **##.##** |
| i | 10 | 14 | 18 | **##.##** | **##.##** | **##.##** | **##.##** |
| j | 6 | 12 | 20 | **##.##** | **##.##** | **##.##** | **##.##** |
| k | 7 | 9 | 14 | **##.##** | **##.##** | **##.##** | **##.##** |
|  |  |  |  |  |  |  |  |
|  |  |  |  | **Expected** |  |  |  |
| **Paths** |  |  |  | **Duration** | **Variance** | **Variance** | **Variance** |
| xxx |  |  |  | **##.##** | **##.##** | **##.##** | **##.##** |
| xxx |  |  |  | **##.##** | **##.##** | **##.##** | **##.##** |
| xxx |  |  |  | **##.##** | **##.##** | **##.##** | **##.##** |
| xxx |  |  |  | **##.##** | **##.##** | **##.##** | **##.##** |
| xxx |  |  |  | **##.##** | **##.##** | **##.##** | **##.##** |
|  |  |  |  |  |  |  |  |
| Probability of critical path <= 38 | | |  |  | **##.#**% | **##.#**% | **##.#%** |
| 90% chance of critical path | | |  |  | **##.##** | **##.##** | **##.##** |

The following activities form the critical path: **<<enter critical path>>**

The project critical time is: **##.## days**

The probability that the critical path will be completed in 38 days or less is: **##.#%**

With a 90% probability of completion, the critical path is: **##.## days**