PERT: Project Evaluation and Review Technique

TE: Earliest Time (Move Forward)

TL: Latest Time

Given the following

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Activity | Duration | Prec. Activity | TE | TL | Slack | On critical |
| 1 | Act1 | 5 | - | 5 | 5 | 0 | Yes |
| 2 | Act2 | 6 | 1 | 11 | 13 | 2 | No |
| 3 | Act3 | 8 | 1 | 13 | 13 | 0 | Yes |
| 4 | Act4 | 2 | 2.3 | 15 | 15 | 0 | Yes |
| 5 | Act5 | 4 | 4 | 19 | 23 | 4 | No |
| 6 | Act6 | 5 | 4 | 20 | 20 | 0 | Yrs |
| 7 | Act7 | 3 | 6 | 23 | 23 | 0 | Yes |
| 8 | Act8 | 1 | 5,7 | 24 | 24 | 0 | yes |

1= Draw



Calculate TE, move from left to right, Add task duration, when there are incoming two arrows of different times span select the largest

TE! = 5, TE2 = 5+6 = 11, TE3 = 13,

TE4 through node 3 is `3+2 = 15, and through node 2 is 11+2 = 13, then take the maximum, TE = 15

And so on, look at the table

**TE at node 8 = The total minimum project time is 24**

Calculate TL, move from right to left, subtract task duration, when there are incoming two arrows of different times span select the smallest

First set the TL of the last node to total project time

TL at node 8 = TL at node 8 = 24

TL 7 = 24 – 1 = 23

TL6 = 24 – 4 = 20

TL 5 = 24-1 = 23

TL4 = either equal 23-4 = 19 or equal 20-5 = 15, take the min which is 15

Continue

Slack = TL-TE

When slack =0, the node is on critical path

