Network Diagramming, Example 1:

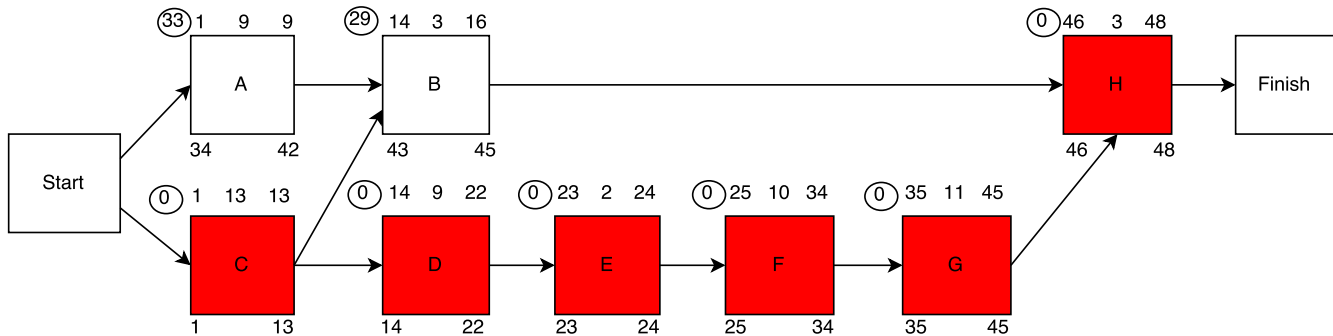| Activity	Preceding Activities	Duration in Days
A	Start	9
B	A, C	3
C	Start	13
D	C	9
E	D	2
F	E	10
G	F	11
H	B, G	3

1. Which path is the critical path and what is its duration?

2. What is the slack/float for activity B?

3. Which path has the longest slack?

4. What is the slack of the path in question 3?

5. If activity B slips from 3 days to 6 days, what is the critical path?

6. With the duration adjustment in question 5, what is the new slack of activity B?

Network Diagramming, Example 2:

Activity	Preceding Activities	Duration in Days
A	Start	8
B	A	4
C	A	10
D	B, C	2
E	D	2
F	D	2
G	D	3
H	E, F, G	2
I	H	1

1. Which path is the critical path and what is its duration?

2. What is the slack/float for activity F?

3. What is the slack/float for activity B?

4. If activity E now takes 4 instead of 2, how has the critical path changed?

5. Based on the information in question 4, what is the new critical path and what is its duration?
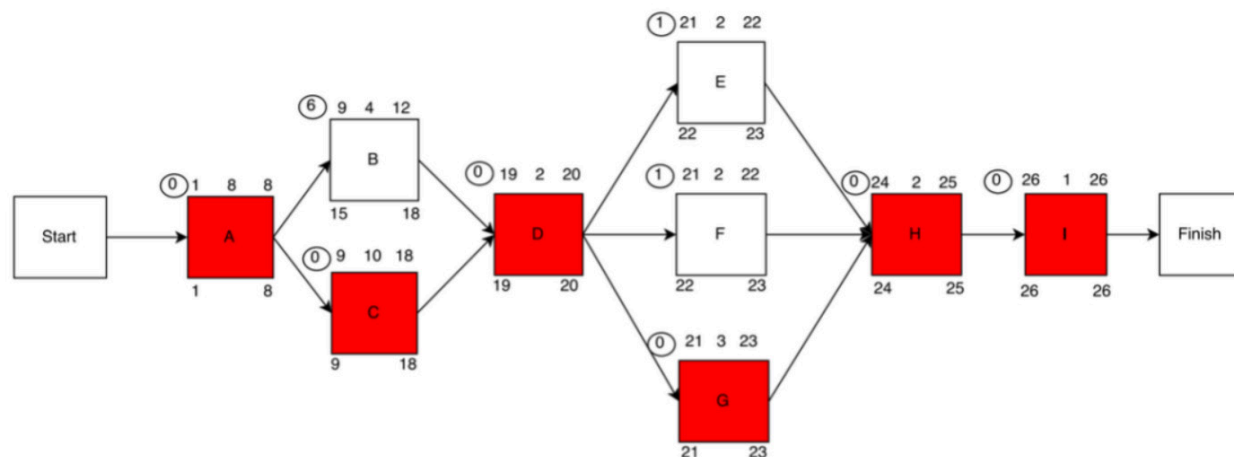
Network Diagram 1 Example Answers

Start-A-B-H-Finish = 15
Start-C-B-H-Finish = 19
Start-C-D-E-F-G-H-Finish = 48 (CP)

1. Which path is the critical path and what is its duration?

    A-B-H=15

    C-B-H=19

    C-D-E-F-G-H=48 (CP)

2. What is the slack/float for activity B? 29

3. Which path has the longest slack? A-B-H

4. What is the slack of the path in question 3? 33

5. If Activity B slips from 3 days to 6 days, what is the critical path? Critical path stays the same.

6. With the duration adjustment in question 5, what is the new slack of activity B? 26

1. Which path is the critical path and what is its duration?

   A-B-D-E-H-I=19 + 2 =21

   A-B-D-F-H-I=19

   A-B-D-G-H-I=20

   A-C-D-E-H-I=25 + 2 =27

   A-C-D-F-H-I=25

   A-C-D-E-H-I=26 (CP)

2. What is the slack/float for activity F? 1

3. What is the slack/float for activity B? 6

4. If activity E now takes 4 instead of 2, how has the critical path changed?
   Critical path changes to A-C-D-E-H-I. It is now 27 days.

5. Based on the information in question 4, what is the new critical path and what is its duration?
   A-C-D-E-H-I=27