

Project Planning & Control

Lesson 5

PDM – Analysis with non-continuous duration, Floats

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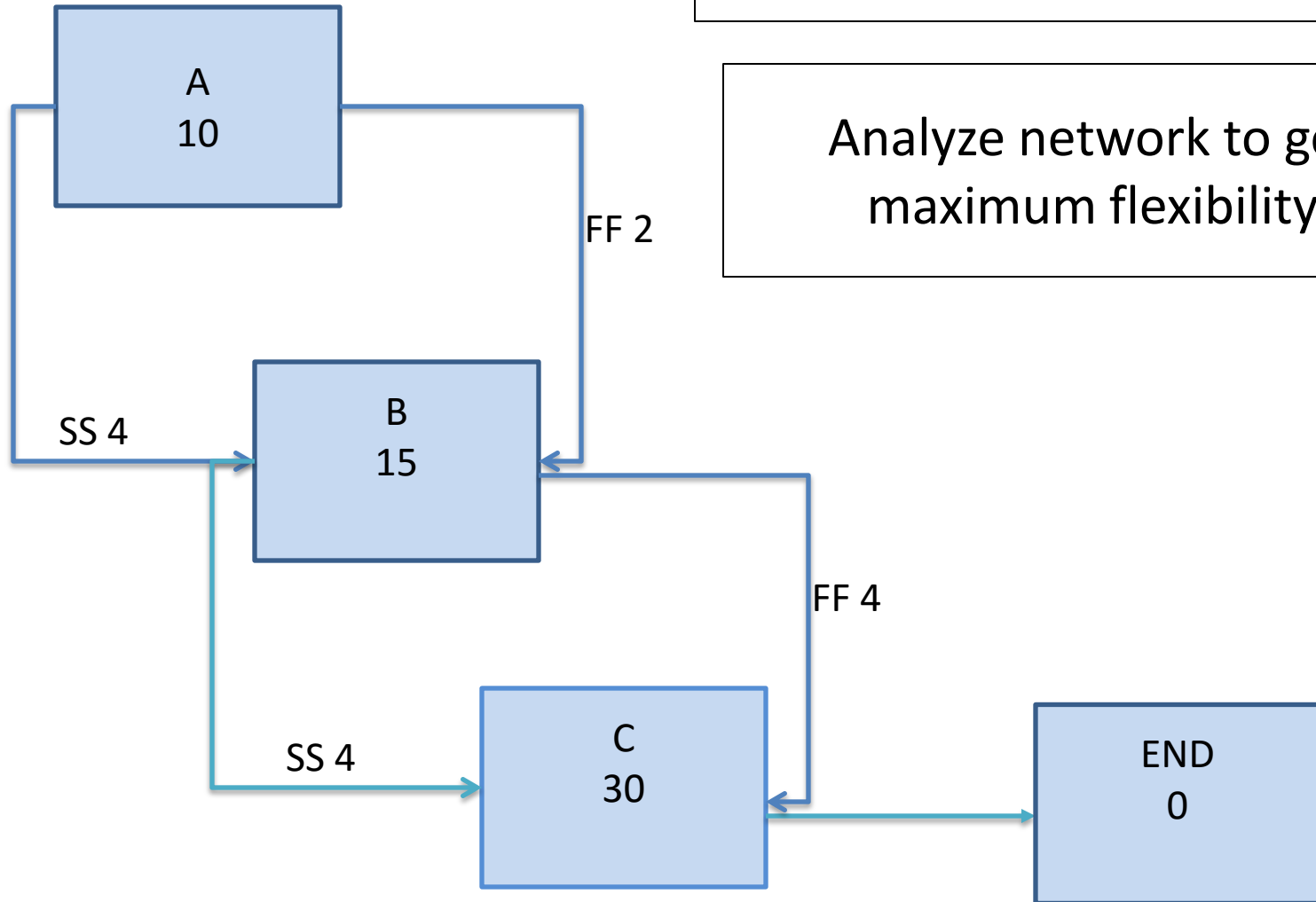
I.I.T. Madras



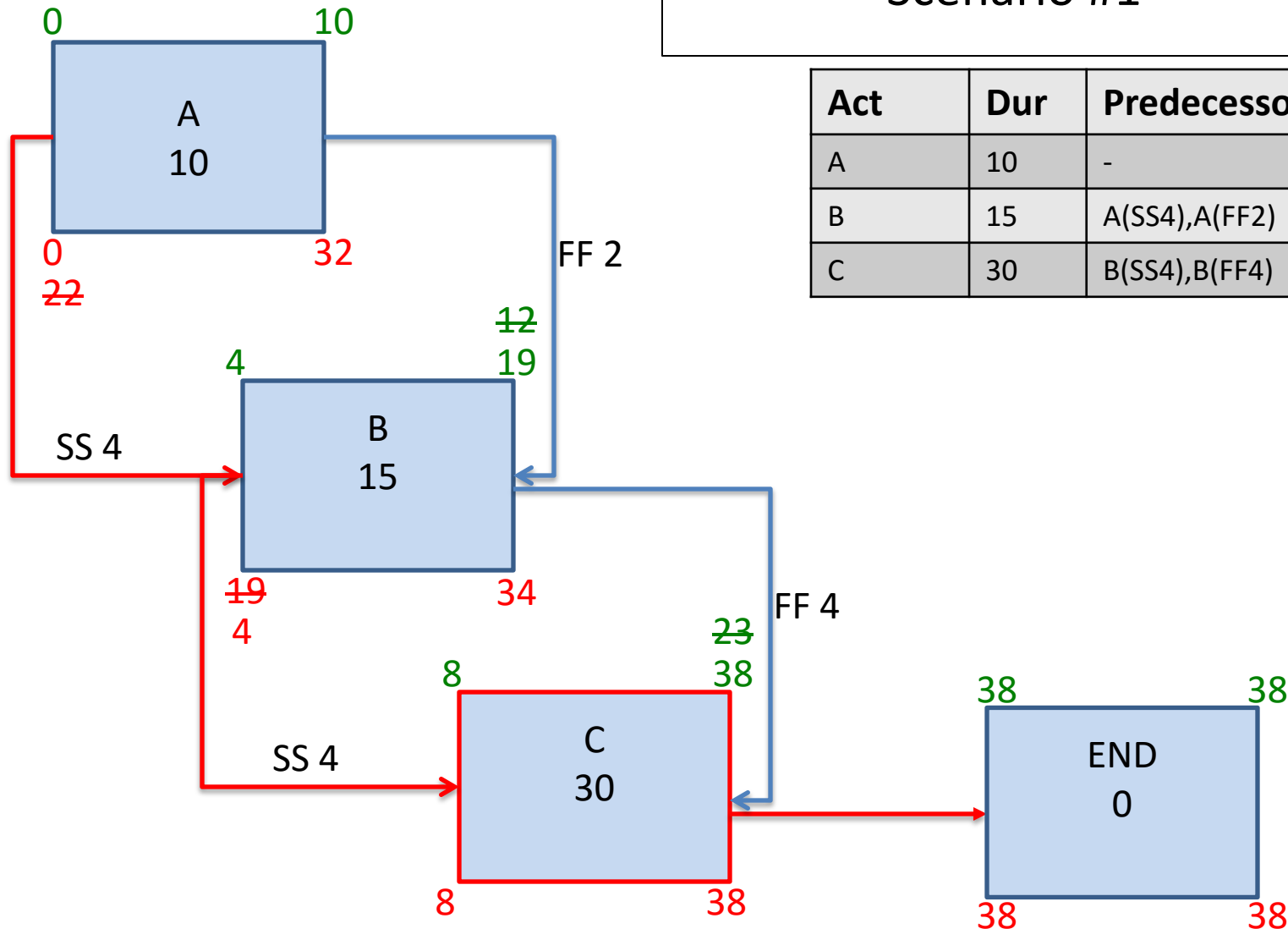
Analysis with Non-Continuous Duration

Non-Continuous Duration Scenario #1

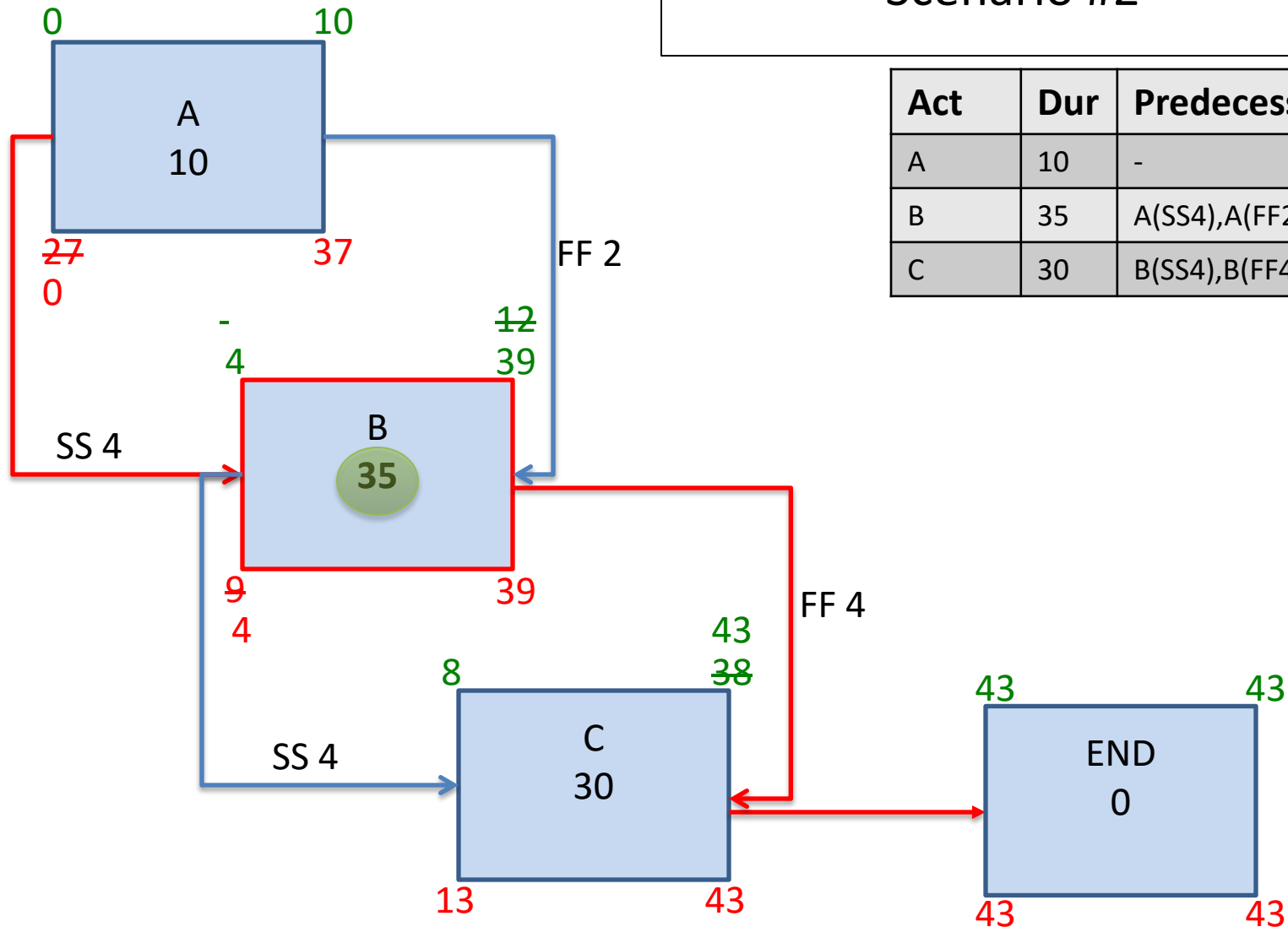
Analyze network to get
maximum flexibility



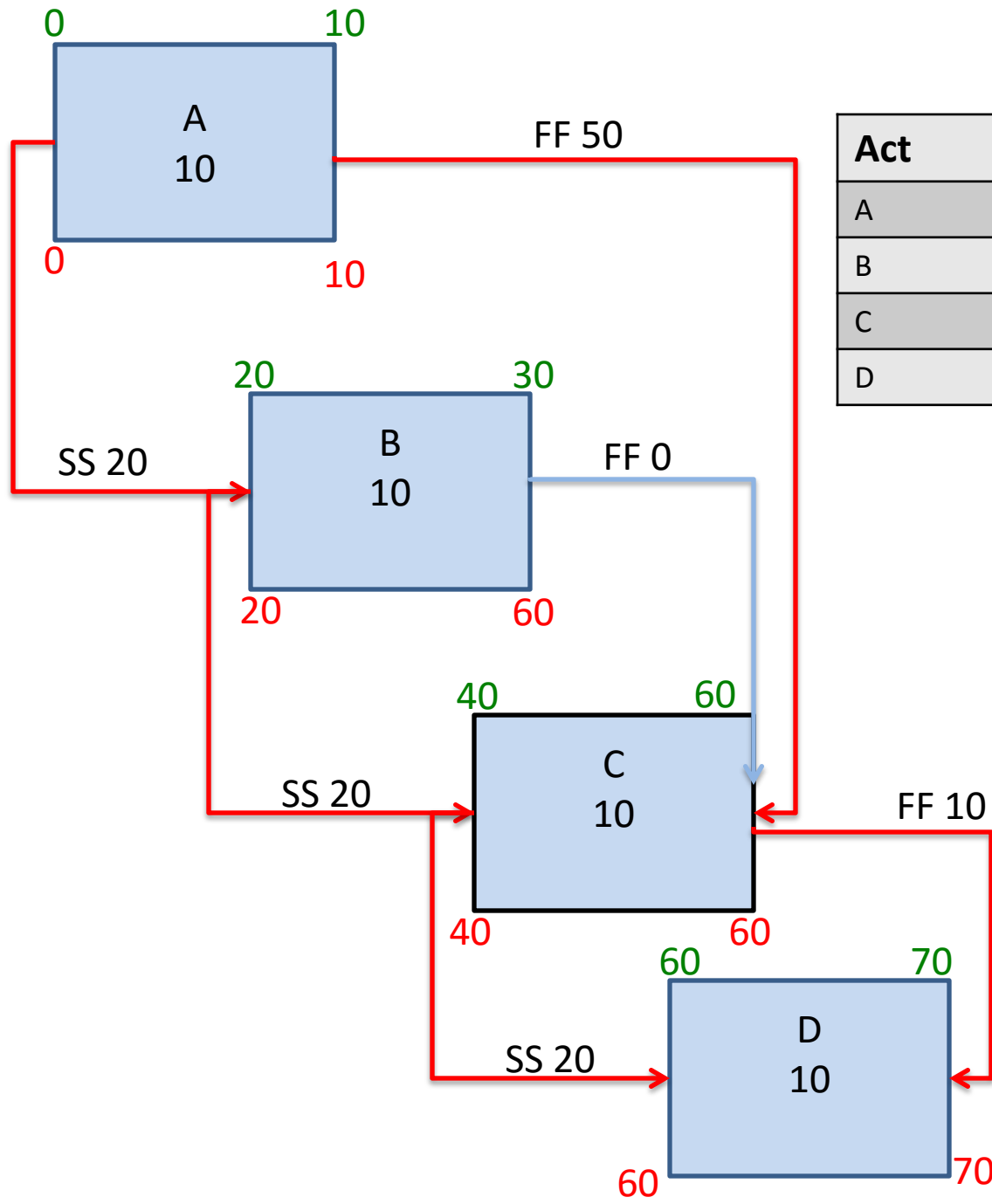
Non-Continuous Duration Scenario #1



Non-Continuous Duration Scenario #2



Scenario #3



Act	Dur	Predecessor
A	10	-
B	10	A(SS20)
C	10	B(SS20), B(FF0) A(FF50)
D	10	C(SS20), C(FF10)

Floats in PDM

- Total Float & Free Float can be calculated as in case of AON if duration is continuous
- Interfering & Independent Float are not part of conventional PDM definition. Are they relevant ?
- Alternate floats are defined for PDM: Start Float, Finish Float, Relation Float, Activity Float.

Floats in PDM

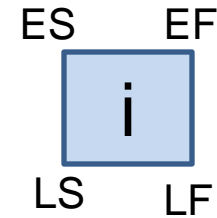
Non-Continuous Duration

1. Task float.

i. **Total float(i) = $LF(i) - ES(i) - Dur(i)$.**

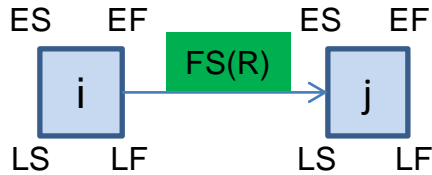
ii. **Start float (i) = $LS(i) - ES(i)$**

iii. **Finish float(i) = $LF(i) - EF(i)$**

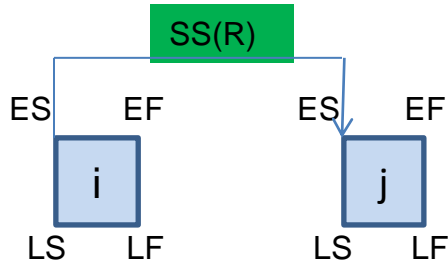


Floats in PDM

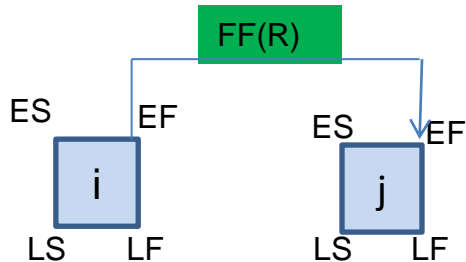
2. Relationship float:



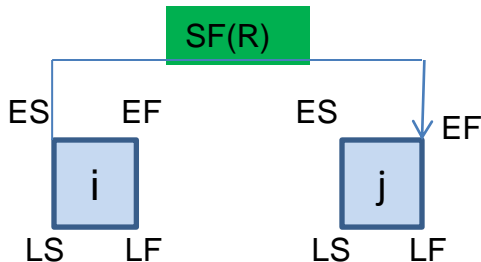
$$RF(FS) = LS(j) - EF(i) - lag(R)$$



$$RF(SS) = LS(j) - ES(i) - lag(R)$$



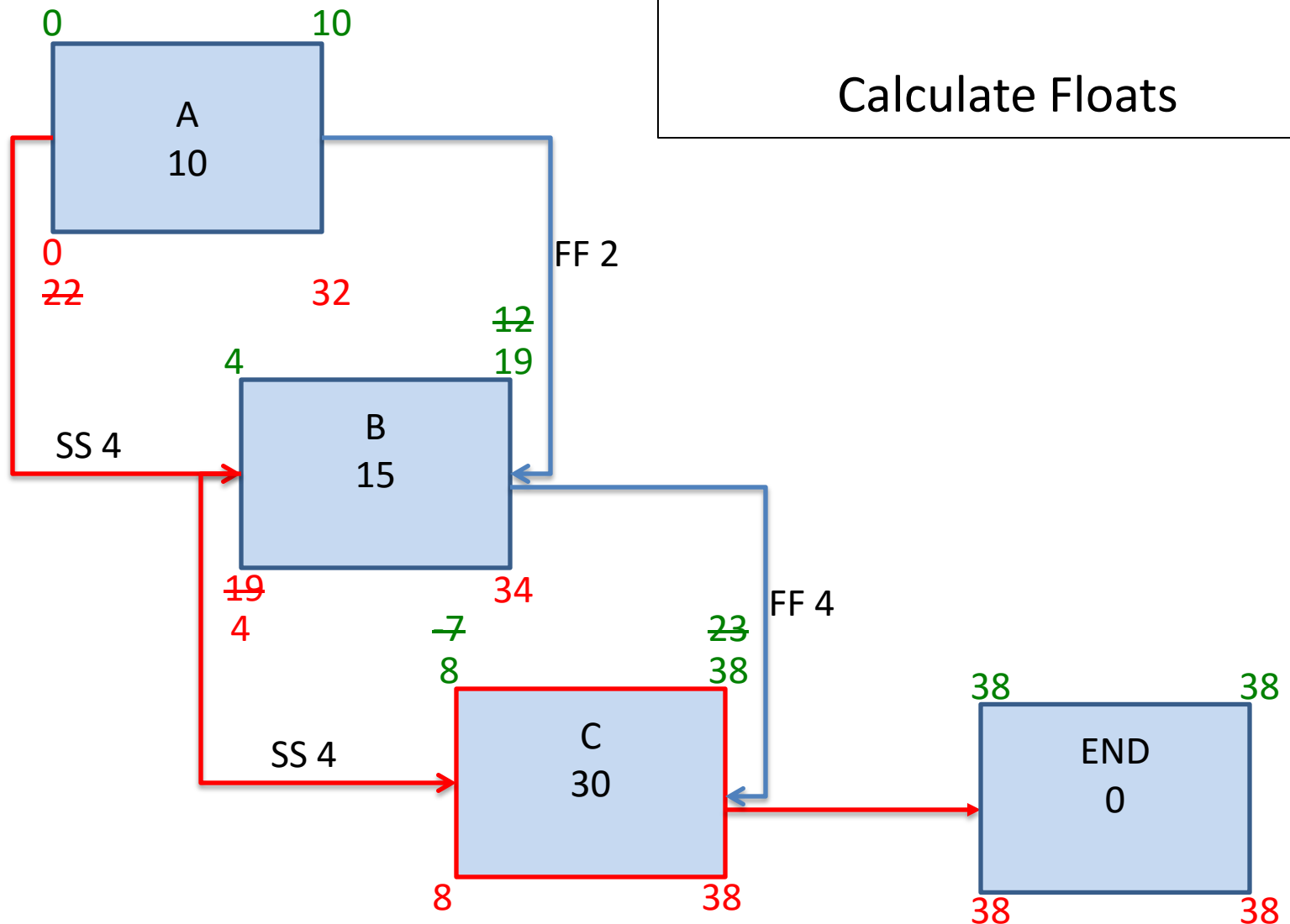
$$RF(FF) = LF(j) - EF(i) - lag(R)$$



$$RF(SF) = LF(j) - ES(i) - lag(R)$$

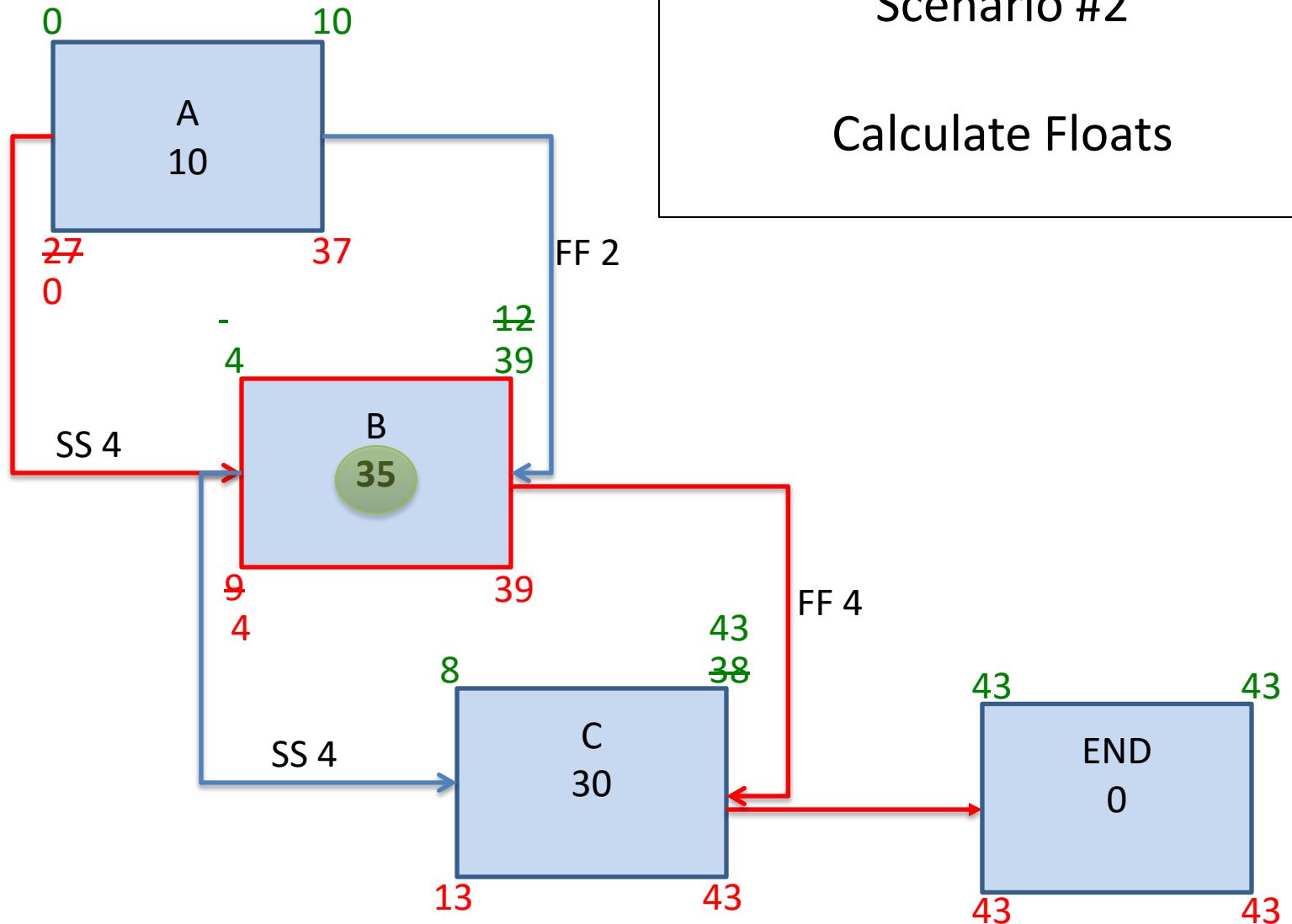
Non-Continuous Duration Scenario #1

Calculate Floats

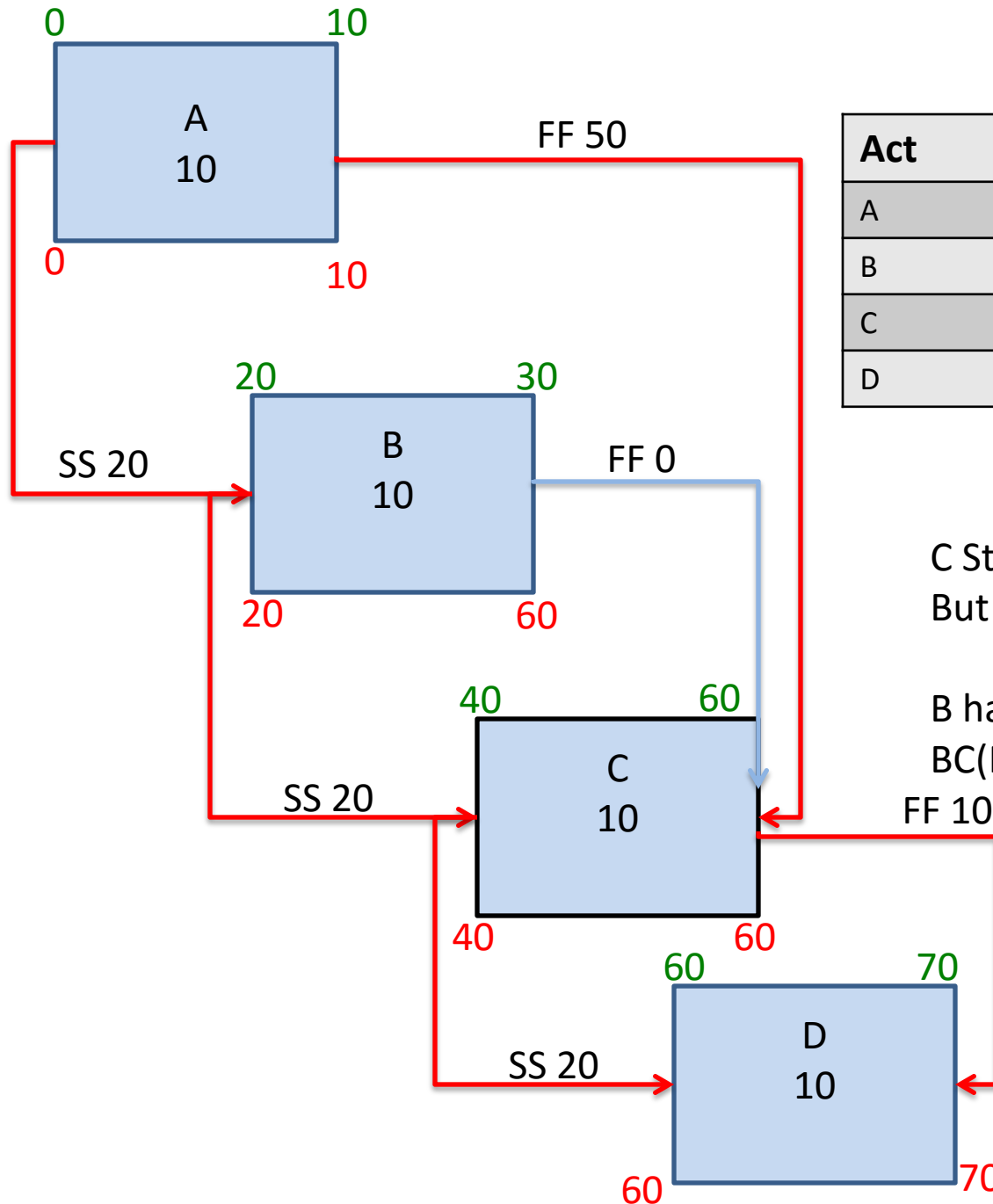


Non-Continuous Duration Scenario #2

Calculate Floats



Scenario #3



Act	Dur	Predecessor
A	10	-
B	10	A(SS20)
C	10	B(SS20), B(FF0)A(FF50)
D	10	C(SS20), C(FF10)

C Start & End Floats 0
But has Activity Float &

B has Activity, End Float
BC(FF) has relationship float