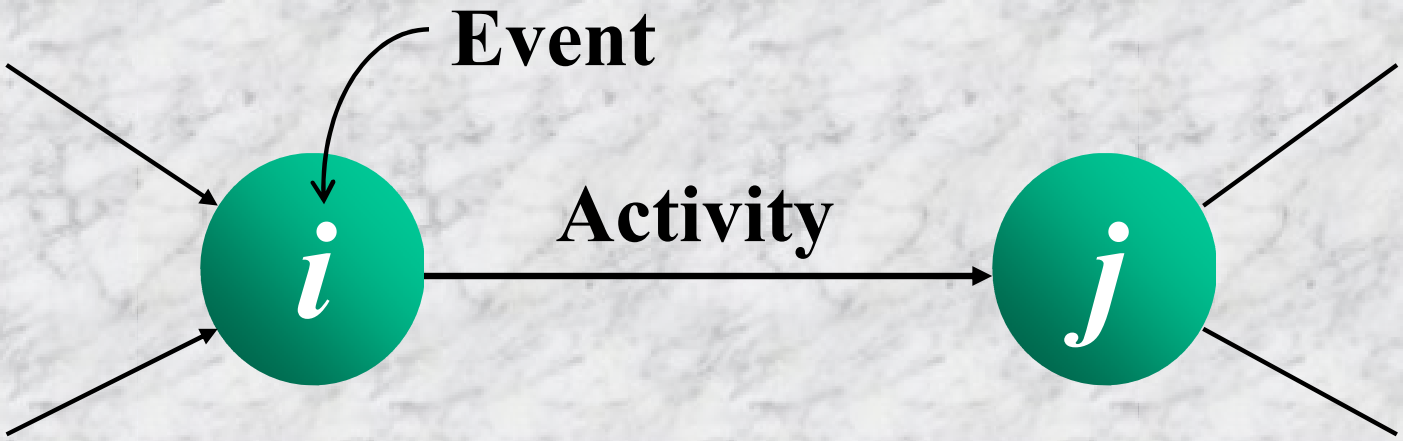
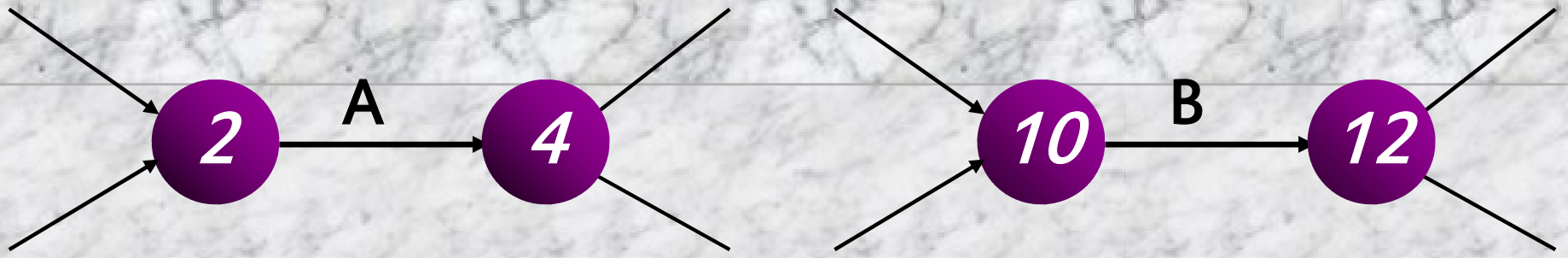
Activity Type

Basic Logic Patterns for Arrow Diagrams

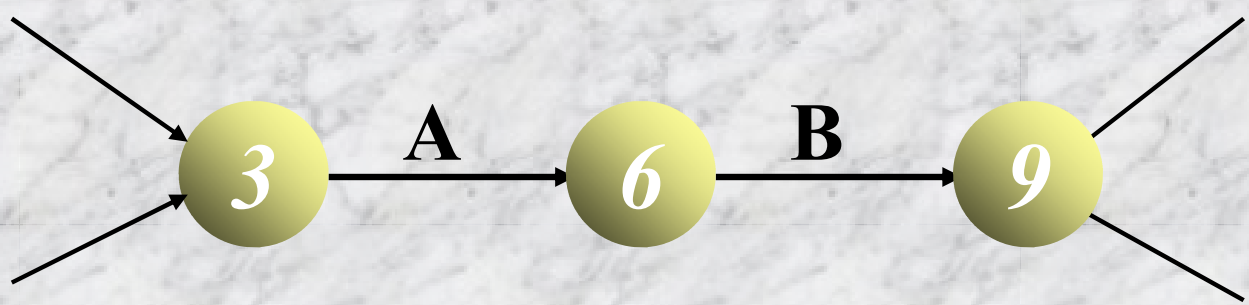


(a) Basic Activity

Basic Logic Patterns for Arrow Diagrams (cont.)

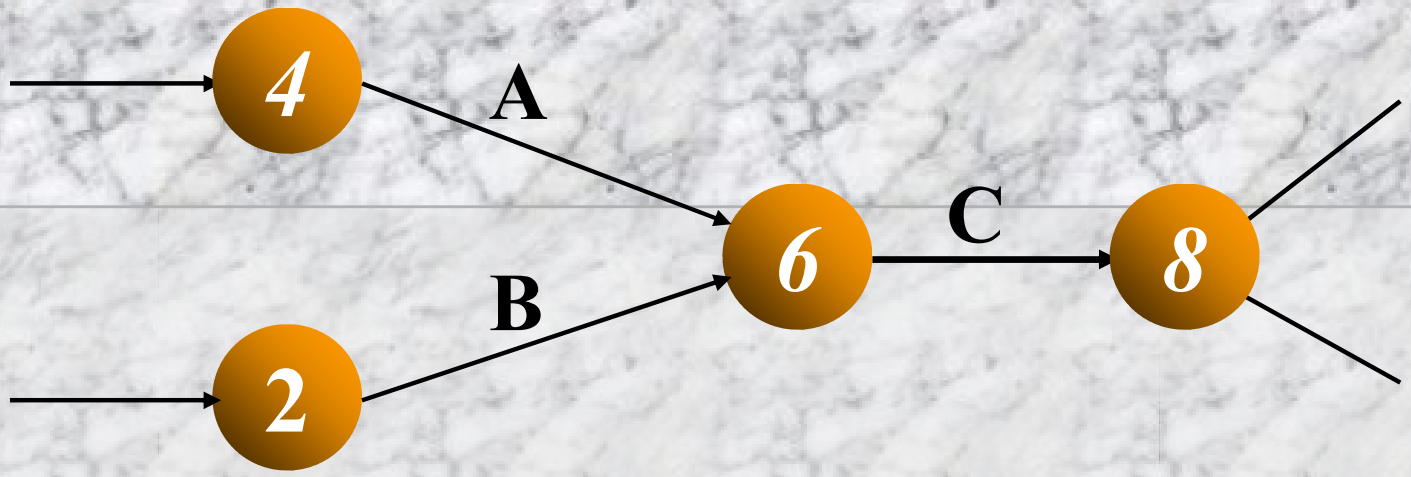


(b) Independent Activities



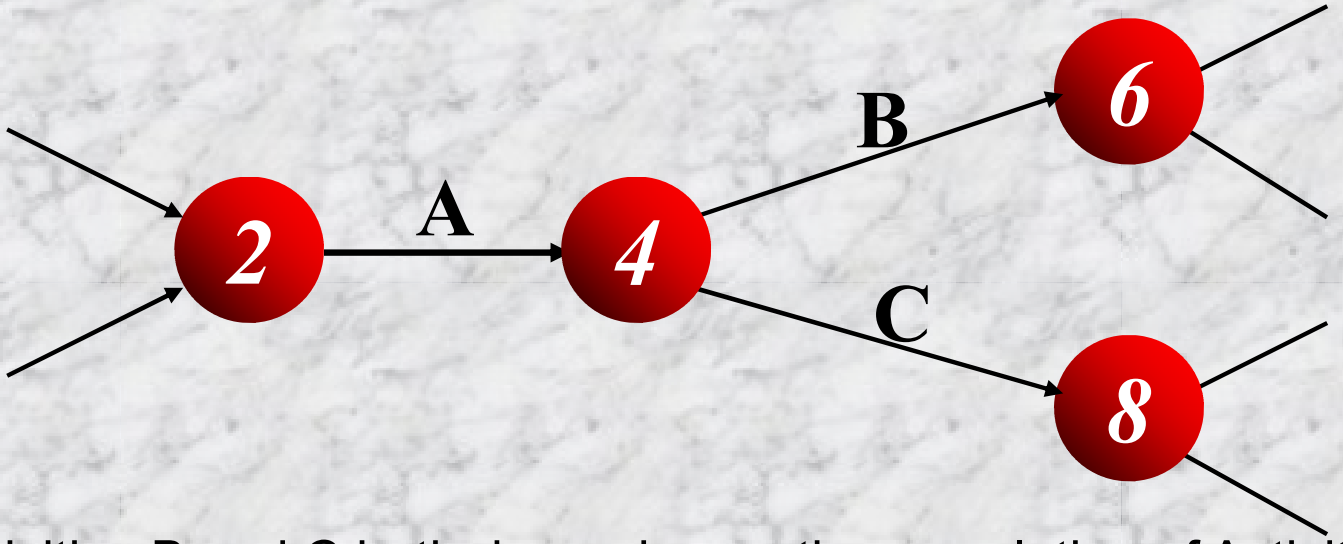
(c) Dependent Activities

Basic Logic Patterns for Arrow Diagrams (cont.)



Activity C depends upon the completion of both Activities A & B

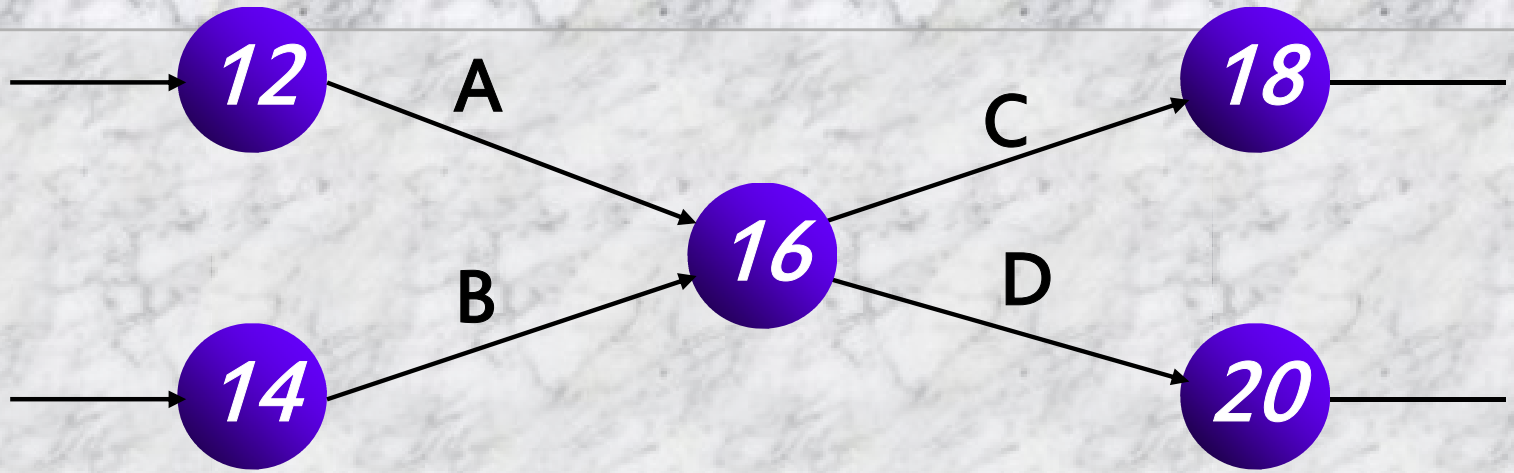
(d) A Merge



Activities B and C both depend upon the completion of Activity A

(e) A Burst

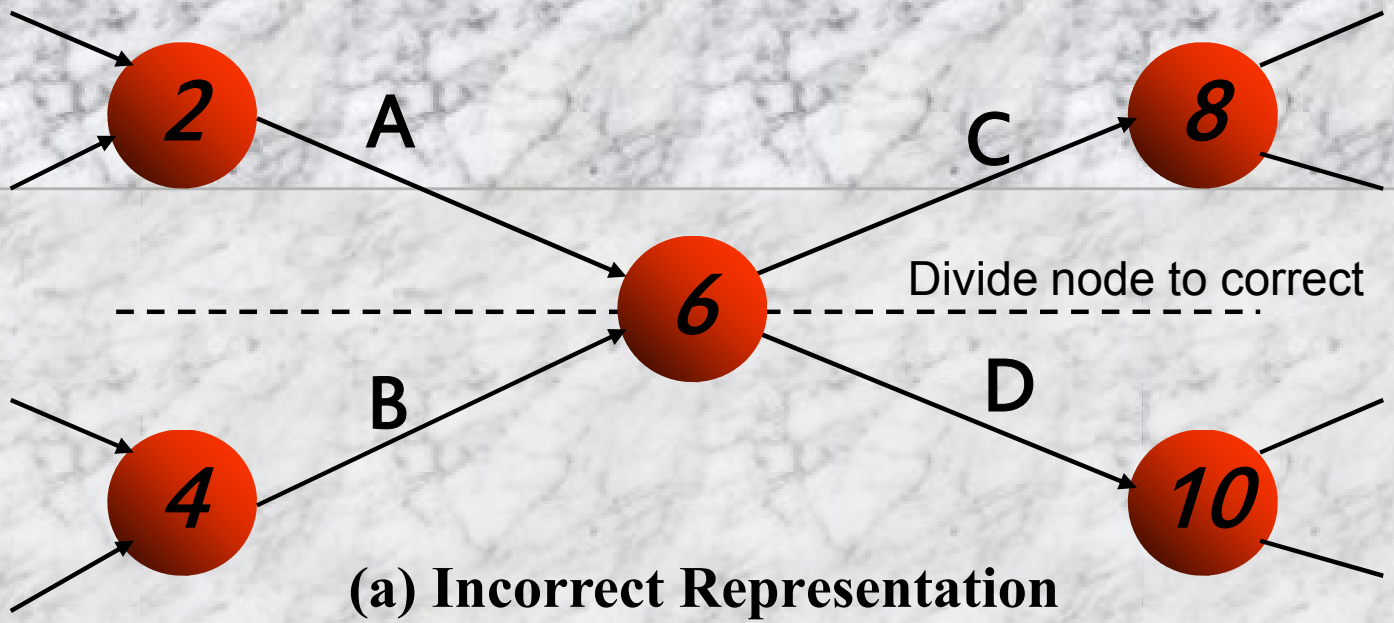
Basic Logic Patterns for Arrow Diagrams (cont.)



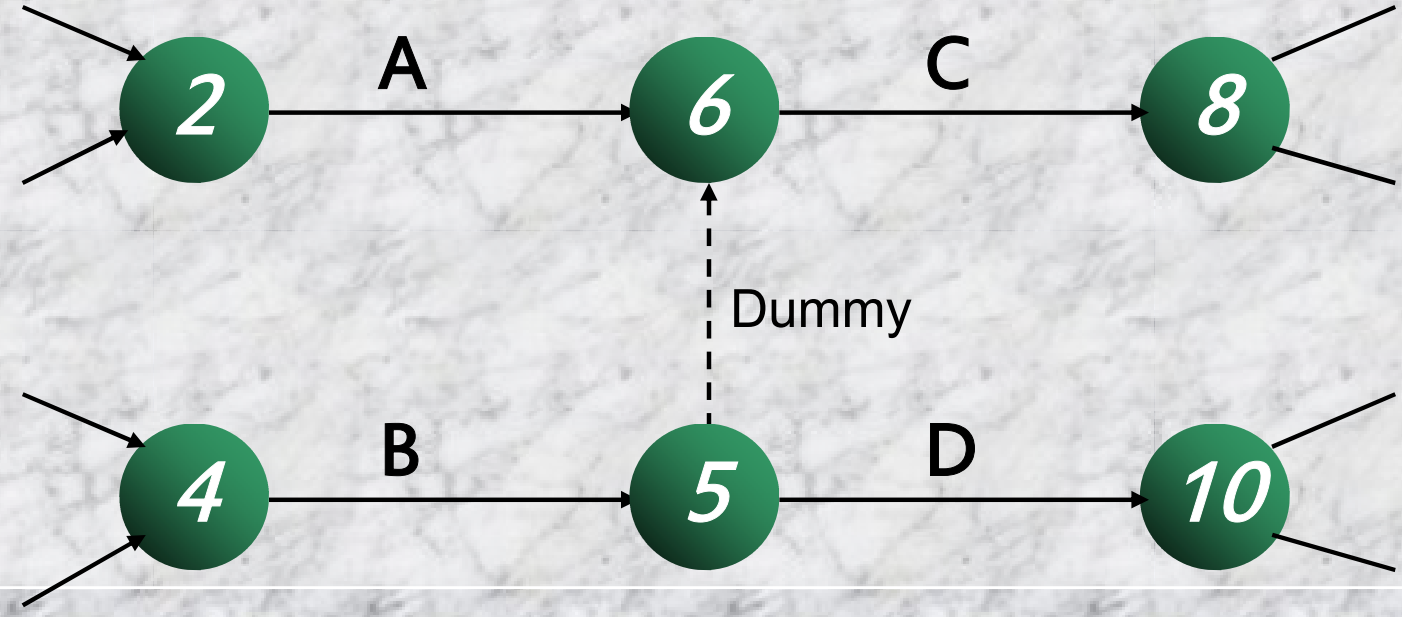
Activities C and D both depend upon the completion of Activities A and B

(f) A Cross

The use of dummy to maintain unique numbering of activities

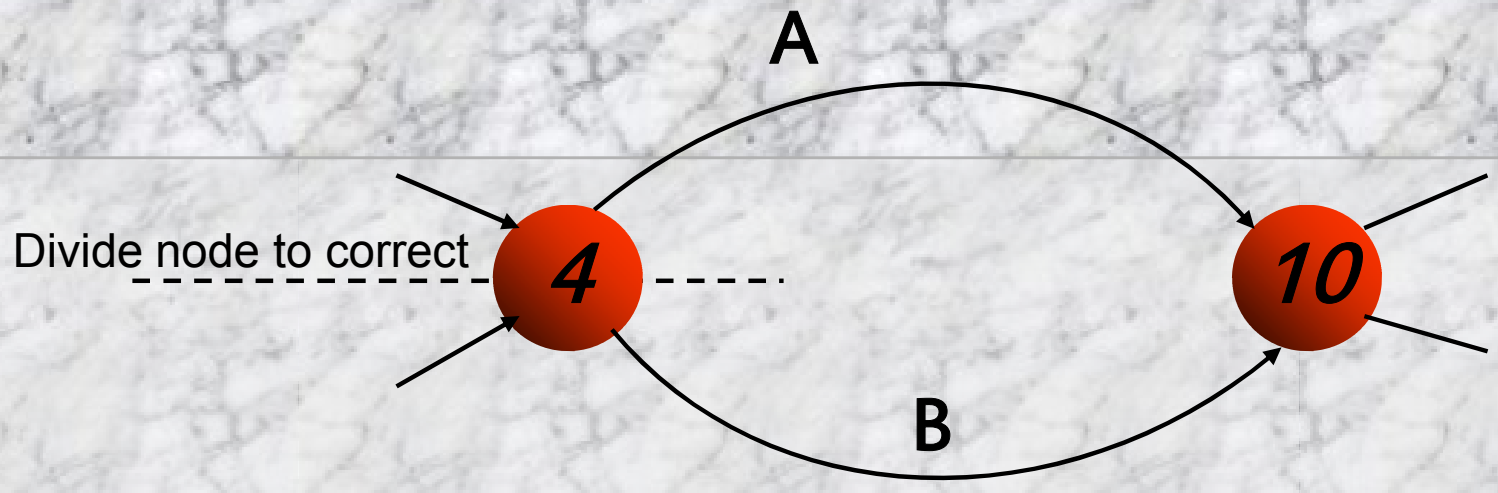


(a) Incorrect Representation

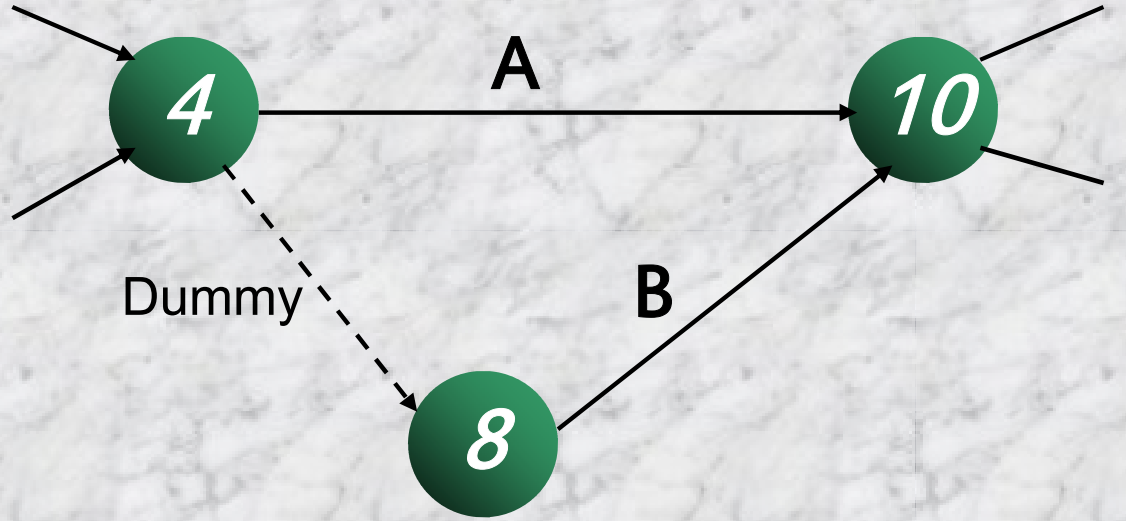


(b) Correct Representation

The use of dummy to maintain unique numbering of activities (cont.)

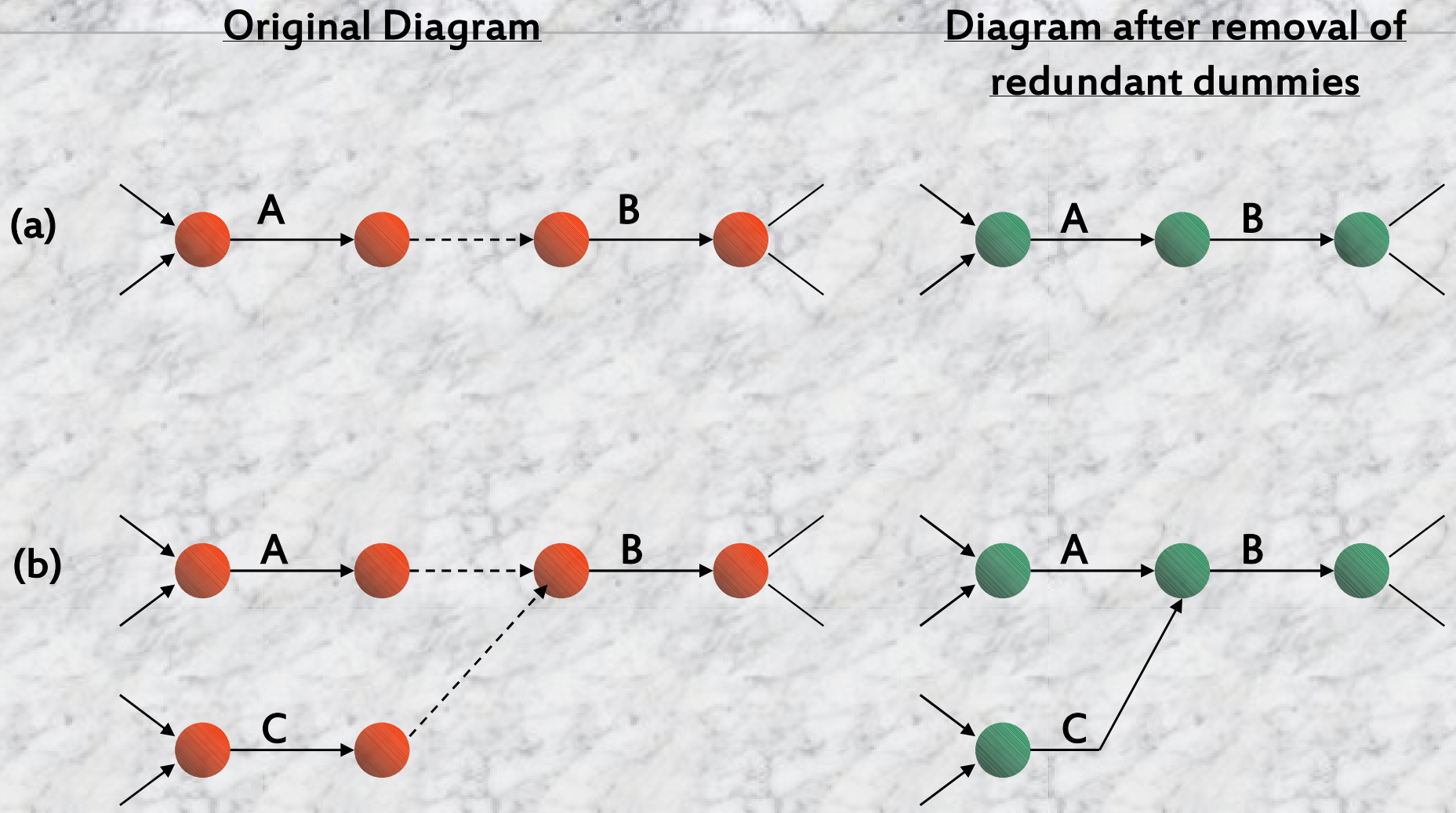


(a) Incorrect Representation



(b) Correct Representation

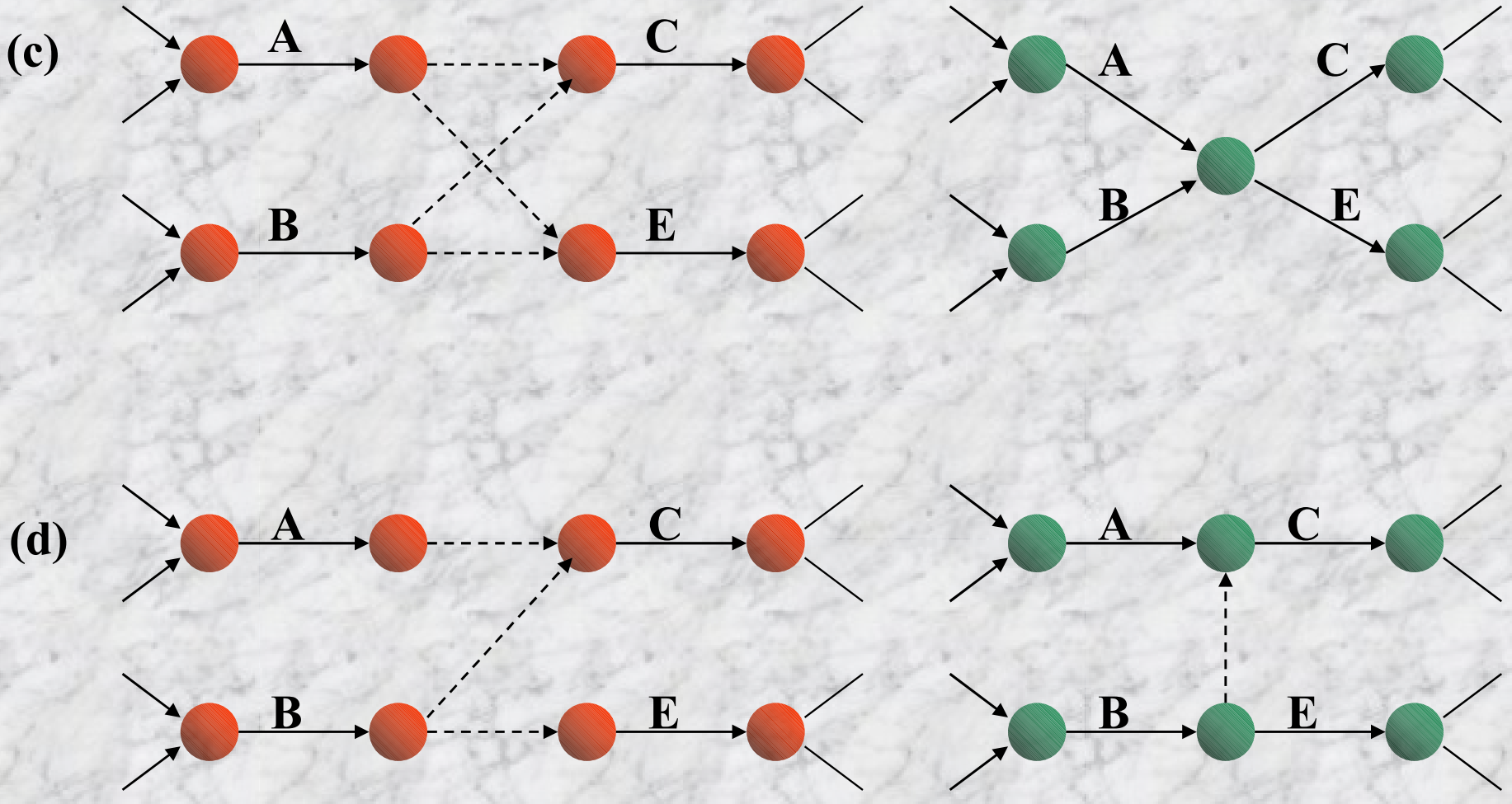
Removal of Redundant Dummies



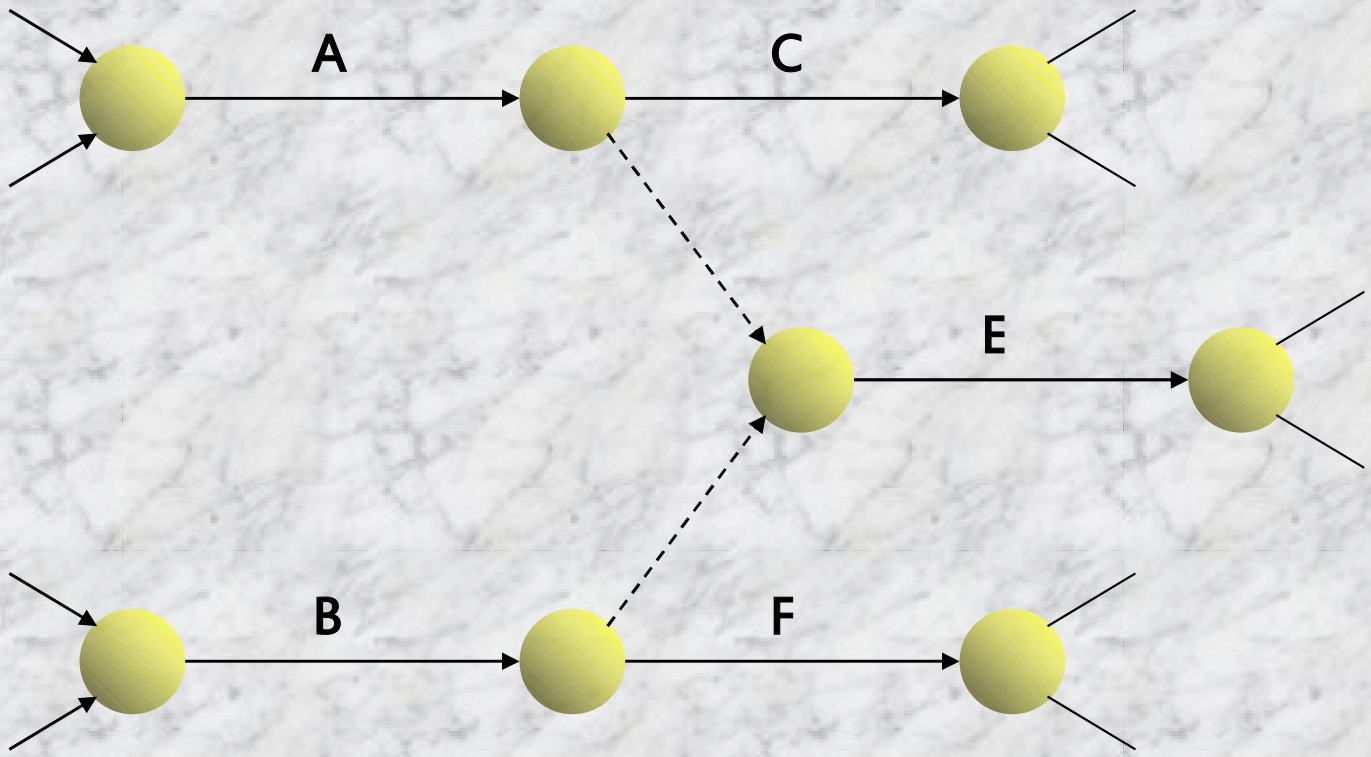
Removal of Redundant Dummies (cont.)

Original Diagram

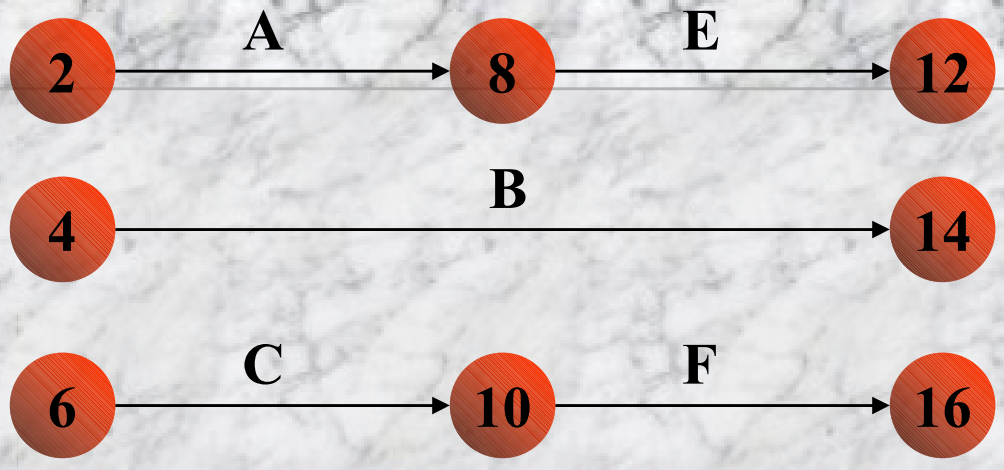
Diagram after removal of redundant dummies



Combining Beginning and Ending Nodes



Combining Beginning and Ending Nodes (cont.)



(a) Incorrect Representation

(b) Correct Representation

Basic Rules of Network Logic

Rule 1.

Before an activity may begin, all activities preceding it must be completed. (Activities with no predecessors are self-actuating when the project begins.)

Rule 2.

Arrows imply logical precedence only. Neither the length of the arrow nor its “x” direction on the drawing have any significance. (An exception to this rule is discussed under “Time-scaled Networks”.)

Basic Rules of Network Logic (cont.)

Rule 3.

Event numbers must not be duplicated in a network.

Rule 4.

Any two events may be directly connected by more than one activity.

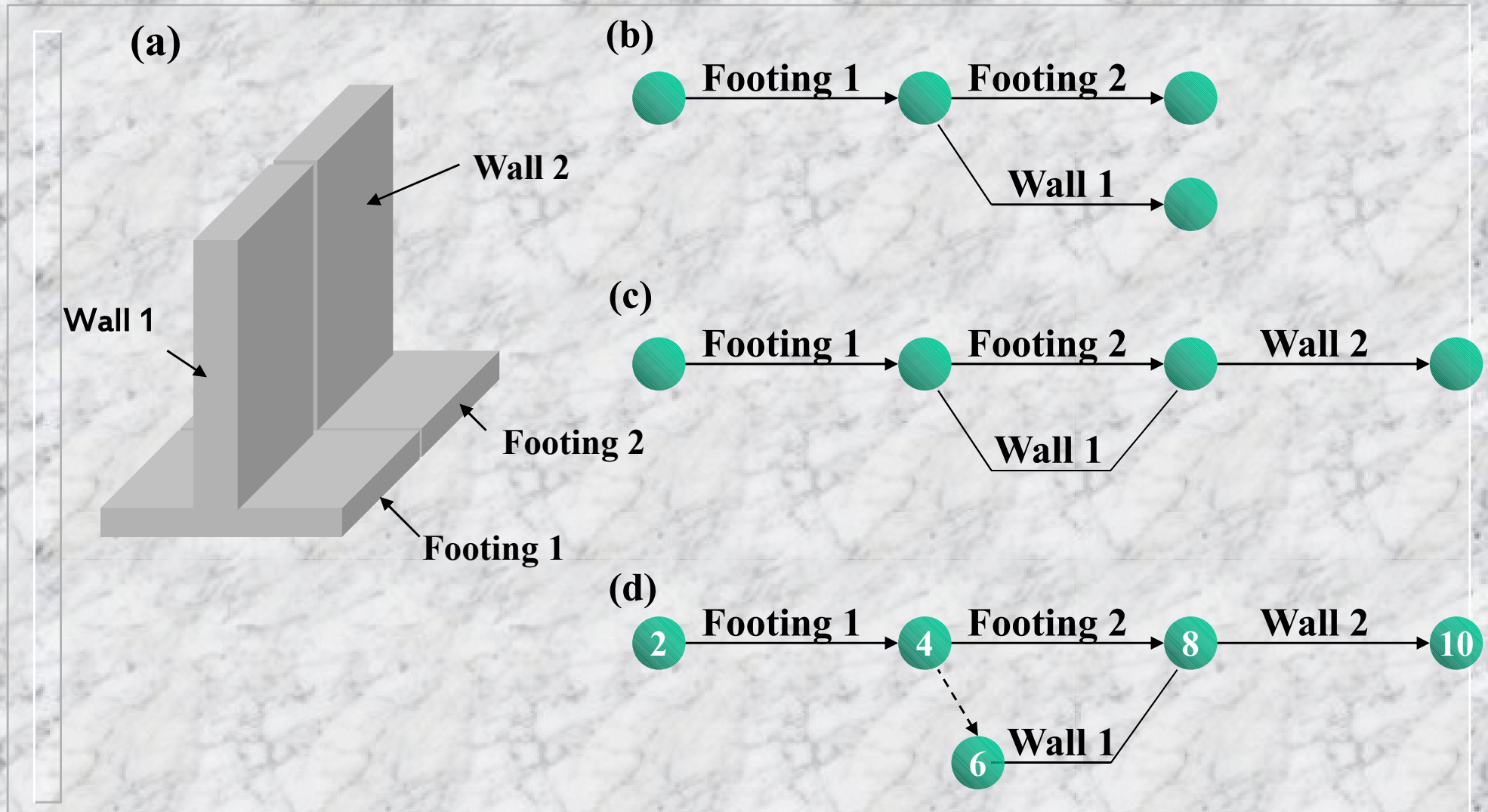
Rule 5.

Networks may have only one initial event (with no predecessor) and only one terminal event (with no successor).

Rule 6.

- Even, odd, in fives or tens
- Smaller numbers to the left
- Each activity has its unique number

Retailing wall arrow diagram - start event approach



Activity List with Redundant Removed - Remodeling Chemical Laboratory

Activity List		
No.	Activity	Depends upon
1	Strip room	-
2	Repair walls and ceiling	~~1~~, 5, 7
3	Repair floor	~~1~~, 5
4	Lay vinyl floor	~~3~~, 12, 13, 14
5	Rough-in plumbing and electrical	1
6	Finish plumbing and electrical	~~2~~, ~~3~~, ~~5~~, ~~9~~, 10, 11, 19
7	Replace existing fume duct	1
8	Install new fume hood	2, 3, 16
9	Install 1/3 base cabinets	~~2~~, ~~3~~, 8, 15
10	Install wall cabinets	2, 3, ~~7~~, 15
11	Install chemical sink	~~2~~, ~~3~~, ~~5~~, 9, 17
12	Paint cabinets	6, ~~8~~, ~~9~~, ~~10~~, ~~11~~, 18
13	Paint walls and ceiling	~~2~~, ~~3~~, 6, ~~8~~, ~~9~~, ~~10~~, 18
14	Obtain vinyl floor covering	-
15	Obtain cabinets	-
16	Obtain fume hood	-
17	Obtain chemical sink	-
18	Painter availability	-
19	Install 2/3 base cabinets	~~2~~, ~~3~~, 9, ~~15~~

Arrow Diagram - Remodeling Chemical Laboratory