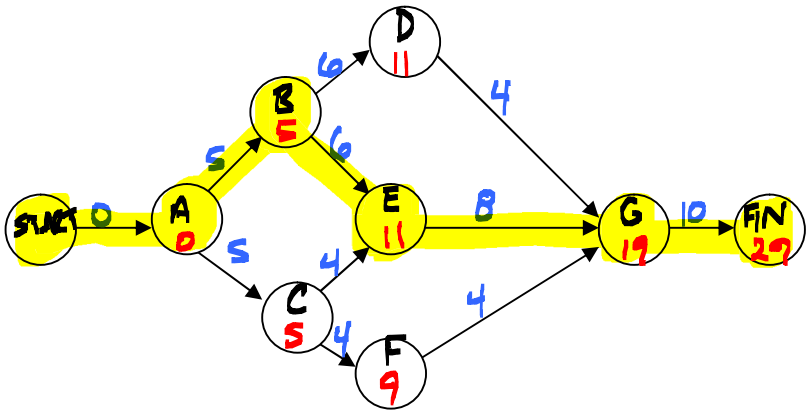
Sec 7.1 – EST Graphs
Networks & Graphs

Name:

These graphs are models to find the EARLIEST TIME any particular job can START. What do you think is meant in a team by the following statement? You are only as fast as your slowest link.

1. Label the provided graph (using the appropriate vertices and weighted edges).

Task	Time	Prerequisites
Start	0	
A	5	None
B	6	A
C	4	A
D	4	B
E	8	B,C
F	4	C
G	10	D,E,F
Finish		

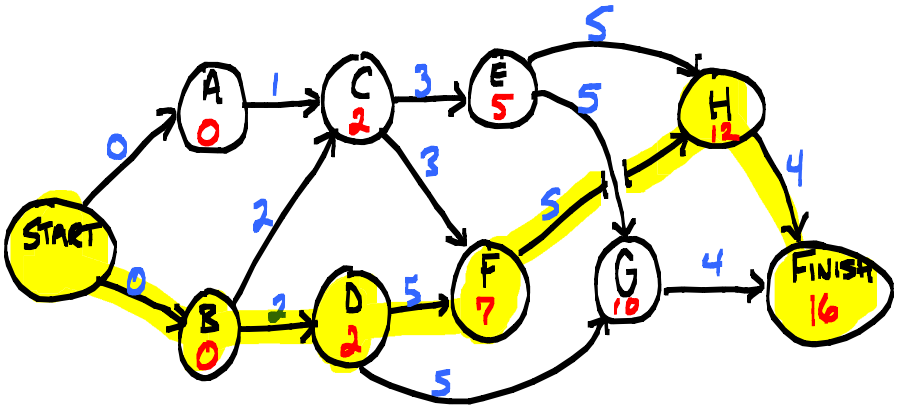


a. What is the earliest time this entire graph can be completed? 29 MINUTES

b. Two tasks must be completed before "E" can start. Which task gets to "E" first and how long does that task have to wait on the other task? C GETS THERE FIRST IN 9 MINUTES AN MUST WAIT 2 MINUTES SO THAT "D" CAN CATCH UP.

2. Create a graph and label it appropriately.

Task	Time	Prerequisites
Start	0	
A	1	None
B	2	None
C	3	A, B
D	5	B
E	5	C
F	5	C, D
G	4	D,E
H	4	E, F
Finish		

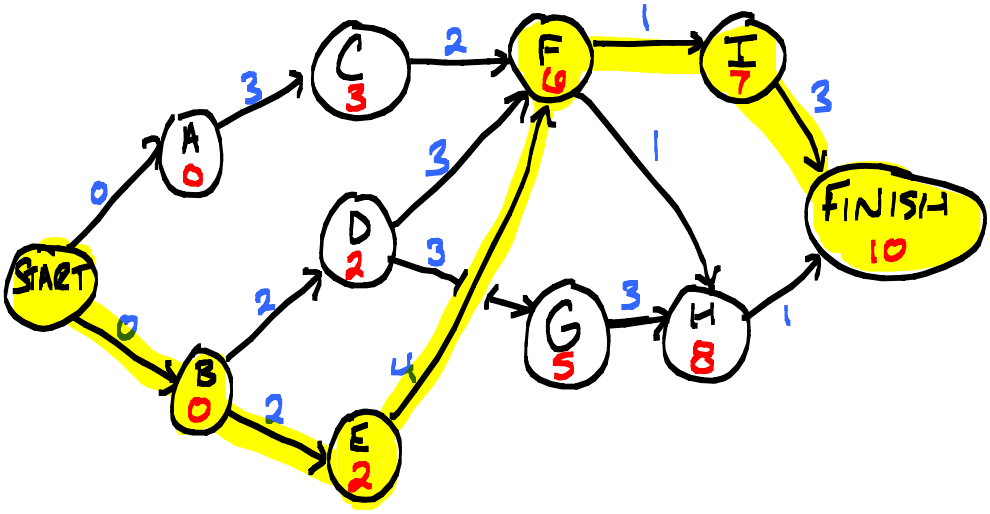


16 MINUTES TO COMPLETE TASK

What is the earliest time this entire graph can be completed?

3. Create a graph and label it appropriately.

Task	Time	Prerequisites
Start	0	
A	3	None
B	2	None
C	2	A
D	3	B
E	4	B
F	1	C, D, E
G	3	D
H	1	F,G
I	3	F
Finish		

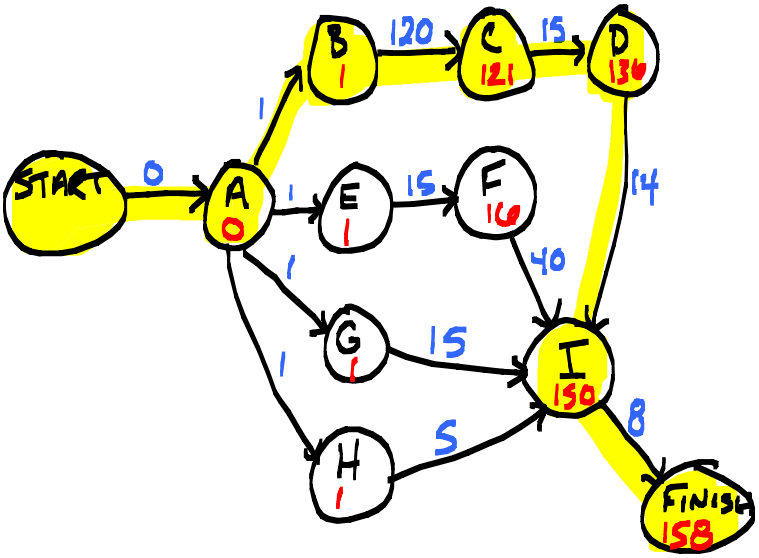


CRITICAL PATH: B E F I ; 10

What is the earliest time this entire graph can be completed? 10 MINUTES

4. Fill in and graph: What is the least amount of time needed to prepare dinner? _____

Task	Time (min)	Prerequisite Task
Start	0	None
A Wash hands	1	None
B Defrost hamburger	120	A
C Shape meat into patties	15	B
D Cook hamburgers	14	C
E Peel and slice potatoes	15	A
F Fry potatoes	40	E
G Make salad	15	A
H Set table	5	A
I Serve food	8	D,F,G,H



IT WILL TAKE 158 MINUTES FROM START TO FINISH TO BEGIN EATING AT THE GRILL OUT.