

UNIVERSITY OF MASSACHUSETTS

Isenberg School of Management

Department of Finance and Operations Management

FOMGT 353-Introduction to Management Science

Homeworks #10 – PERT

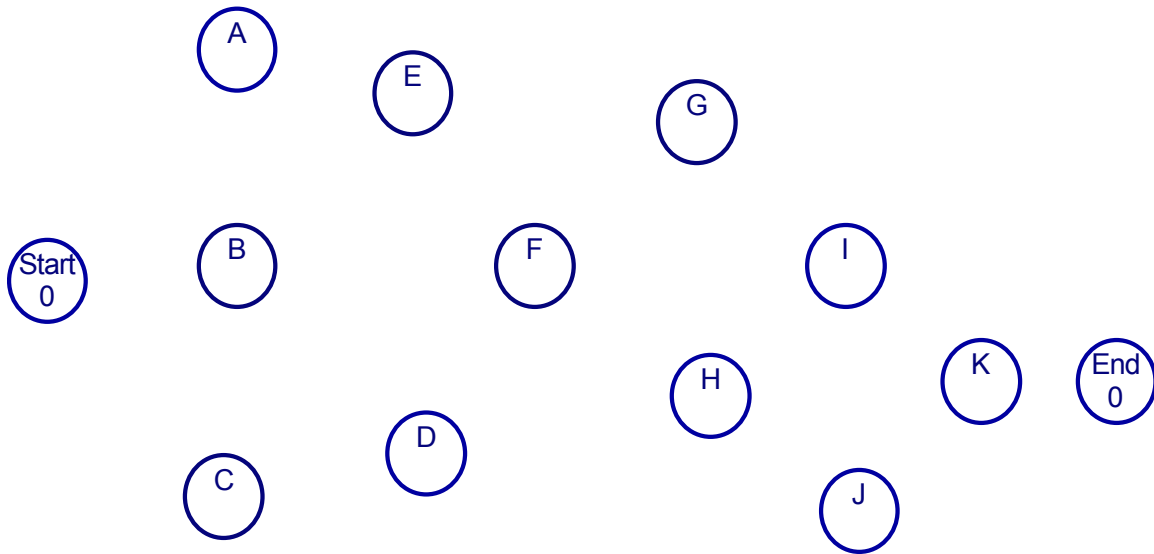
My name is:

Your project estimates and dependencies look as follows:

Task	Immediate Predecessors	Estimated Completion Time (Hours)			Slack	Mean	Standard Deviation	Variance
		a	m	b				
Start		0.0	0.0	0.0				
A	Start	1.0	2.0	9.0				
B	Start	2.5	4.5	9.5				
C	Start	2.0	5.0	14.0				
D	C	4.0	6.5	18.0				
E	A	2.0	4.0	18.0				
F	B, D, E	22.0	30.0	50.0				
G	F	15.0	20.0	37.0				
H	F	4.5	10.0	21.5				
I	G, H	12.0	15.0	24.0				
J	H	14.0	14.5	48.0				
K	I, J	5.0	5.0	5.0				
End	K	0.0	0.0	0.0				

Complete the Chart

Complete the Graph that follows with arrows; mean times; earliest start times; earliest finish times; latest start times and latest finish times:



Calculate the slacks:

Task		Slack Time
A	$LS(A) - ES(A) =$	
B	$LS(B) - ES(B) =$	
C	$LS(C) - ES(C) =$	
D	$LS(D) - ES(D) =$	
E	$LS(E) - ES(E) =$	
F	$LS(F) - ES(F) =$	
G	$LS(G) - ES(G) =$	
H	$LS(H) - ES(H) =$	
I	$LS(I) - ES(I) =$	
J	$LS(J) - ES(J) =$	
K	$LS(K) - ES(K) =$	

Calculate the mean activity completion time:

Calculate the standard deviation of the mean completion time:

What is the probability that the project will take less than 82 days?

What is the probability that the project will take more than 96 days?