

**In Class 5**  
**Project Management**  
**OPS 370**

**Problem 1**

Use the table of activities below to answer the following questions:

<b>Activity</b>	<b>Duration</b>	<b>Immediate Predecessors</b>
P	3	None
Q	5	P
R	4	P
S	2	Q,R
T	6	S

- a. Draw the network diagram for this problem
- b. What are the lengths of the paths through this network?
- c. Which of these paths is the critical path?
- d. Calculate the Early Start, Early Finish, Late Start, and Late Finish times for the activities in this project

**Problem 2**

Use the table of activities below to answer the following questions:

Time Estimates

<b>Activity</b>	<b>Optimistic</b>	<b>Most Likely</b>	<b>Pessimistic</b>	<b>Immediate Predecessors</b>
A	3	4	5	None
B	7	8	9	A
C	6	6	6	B
D	5	5	5	A
E	2	3	3	C,D

- a. Draw the network diagram for this problem.
- b. Calculate the expected times and variances for each activity.
- c. What are the lengths of the paths through this network?
- d. Which of these paths is the critical path?
- e. What is the variance of the critical path?