MA111: Contemporary mathematics

If you had as many people as you wanted, but only one person could work on one task, when is the earliest you could be finished putting out the pots and pans measured in minutes after you start working on the tasks?

	Name	Duration	Need to finish these first
M:	Make the pasta	34 minutes	(P) Put out the pots and pans
S:	Make the sauce	10 minutes	(P&G) Put out the pots and pans, and get groceries
B:	Make the bread	11 minutes	(P&G) Put out the pots and pans, and get groceries
L:	Make the salad	12 minutes	(P&G) Put out the pots and pans, and get groceries
P:	Put out pots and pans	3 minutes	(C&D) Clean counter, do dishes
C:	Clean counter	2 minutes	(nothing)
D:	Do dishes	33 minutes	(nothing)
G:	Get groceries	35 minutes	(nothing)

Schedule:

- Mini-Exam 4 is in class, Thu Dec 4th, 2014
- Exam 4 is Tue Dec 16th, 2014 from 3:30pm to 5:30pm

Today we try to prioritize

Important concepts

- **Tasks** have a **duration**

- Tasks have **dependencies** that must be done first

- The **schedule** lists the start time of each task

- Simplest way to schedule is a **priority list**- do them in this order

- Tuesday we used "shorter tasks get higher priority"

- Today we used "stricter start time tasks get higher priority"

  We calculated the latest start time minus the earliest start time: the "slack" or "float" of a task

Exit quiz

	Name	Duration	Need to finish these first
M:	Make the pasta	34 minutes	(P) Put out the pots and pans
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L:	Make the salad	12 minutes	(P&G) Put out the pots and pans, and get groceries
P:	Put out pots and pans	3 minutes	(C&D) Clean counter, do dishes
C:	Clean counter	2 minutes	(nothing)
D:	Do dishes	33 minutes	(nothing)
G:	Get groceries	35 minutes	(nothing)

- Calculate the earliest start time for each task

- Calculate the latest start time for each task

- Calculate the float time for each task

Exit quiz answers

Task	C	P	S	B	L	D	M	G
Duration	2	3	10	11	12	33	34	35
Earliest end	2	36	46	47	48	33	70	35
Earliest start	0	33	36	36	36	0	36	0
Latest start	31	33	60	59	58	0	36	23
Float time	31	0	24	23	22	0	0	23