

As the PETALS Bike Co. completes plans for its new assembly line -- of course they assemble bikes -- the designers have identified 25 different tasks which must be completed in the assembly process. Bert, V.P. of Operations, now faces the job of balancing the assembly line. He lists precedences and provides time estimates for each task based on work sampling techniques. His goal is to produce 1000 bikes each 5-day (8 hours/day) work-week. Each work hour has 60 minutes (of course, at 60 seconds per minute), and his company does manage to get 8 productive hours of work done each day. Use **Largest Task Time** as the primary, **Largest # of Successors** as the secondary, and **Highest Alphabetic-Lowest Numeric** Order as the tertiary heuristics. Bert has asked you to assist him by **Balancing this Line**, clearly showing the station number and task content of each workstation. He would also like to see your precedence diagram.

Immediate		Task Time	Immediate		Task Time
Task	Predecessor(s) (seconds)		Task	Predecessor(s) (seconds)	
K3	-	60.0	E3	F3	109.0
K4	K3	24.0	D6	F4	53.0
K9	K3	27.0	D7	F9, E2, E3	72.0
J1	K3	66.0	D8	E3, D6	78.0
J2	K3	22.0	D9	D6	37.0
J3	-	3.0	C1	F7	78.0
G4	K4, K9	79.0	B3	D7, D8, D9, C1	70.0
G5	K9, J1	29.0	B5	C1	105.0
F3	J2	32.0	B7	B3	18.0
F4	J2	92.0	A1	B5	52.0
F7	J3	21.0	A2	B5	68.0
F9	G4	126.0	A3	B7, A1, A2	114.0
E2	G5, F3	18.0			