

ACTIVITY	PREDECESSOR	TIME (WEEKS)	(WEEKS)	COST/WEEK
A	—	9	6	\$3,000
B	A	8	5	3,500
C	A	15	10	4,000
D	B, C	5	3	2,000
E	C	10	6	2,500
F	D, E	2	1	5,000

- Draw the project diagram.
- What is the normal project length?
- What is the project length if all activities are crashed to their minimum?
- Braggi's loses \$3,500 in profit per week for every week the bakery is not completed. How many weeks will the project take if we are willing to pay crashing cost as long as it is less than \$3,500?

Advanced Problem

16 Assume the network and data that follow:

ACTIVITY	NORMAL		CRASH TIME (WEEKS)	CRASH		IMMEDIATE PREDECESSORS
	TIME (WEEKS)	COST		COST	COST	
A	2	\$50	1	\$70	—	
B	4	80	2	160	A	
C	8	70	4	110	A	
D	6	60	5	80	A	
E	7	100	6	130	B	
F	4	40	3	100	D	
G	5	100	4	150	C, E, F	

- Construct the network diagram.
- Indicate the critical path when normal activity times are used.
- Compute the minimum total direct cost for each project duration based on the cost associated with each activity. Consider durations of 13, 14, 15, 16, 17, and 18 weeks.
- If the indirect costs for each project duration are \$400 (18 weeks), \$350 (17 weeks), \$300 (16 weeks), \$250 (15 weeks), \$200 (14 weeks), and \$150 (13 weeks), what is the total project cost for each duration? Indicate the minimum total project cost duration.

Analytics Exercise: Product Design Project

You work for Nokia in their global cell phone group. You have been made project manager for the design of a new cell phone. Your supervisors have already scoped the project so you have a list showing the work breakdown structure and this includes major project activities. You must plan the project schedule and calculate project duration.

Your boss wants the schedule on his desk tomorrow morning!

You have been given the information in Exhibit 5.13. It includes all the activities required in the project and the duration of each activity. Also, dependencies between the activities have been identified. Remember that the preceding