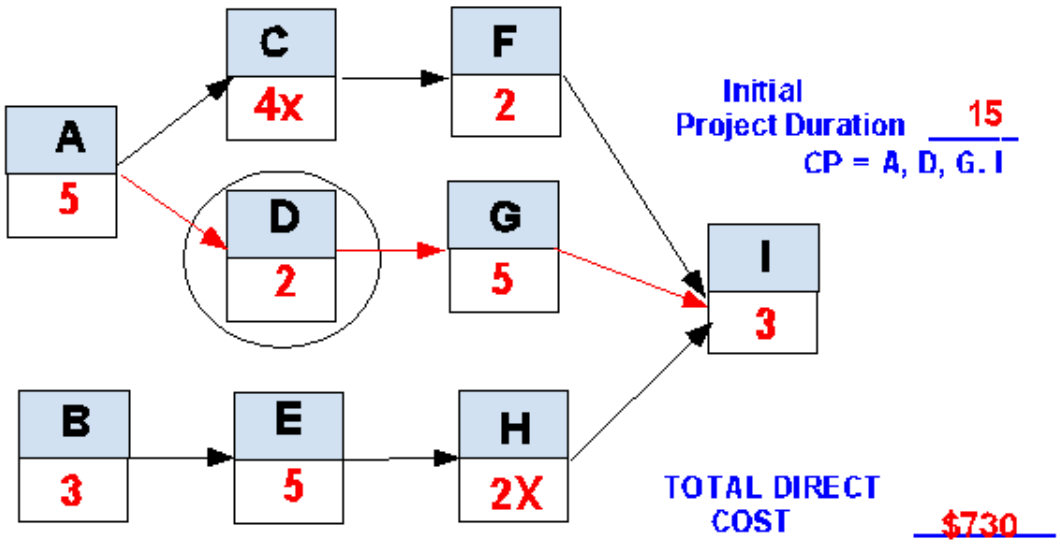
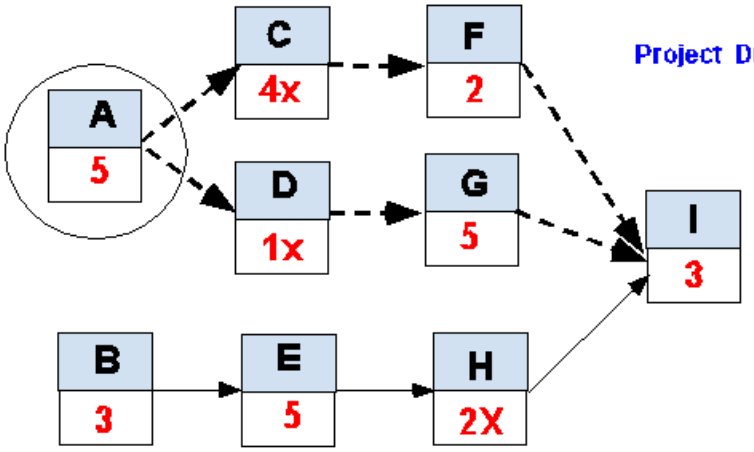
4. **Given the data and information that follow, compute the total direct cost for each project duration. If the indirect costs for each project duration are $90 (15 time units), $70 (14), $50 (13), $40 (12) and $30 (11), compute the total project cost for each duration. What is the optimum cost–time schedule for the project? What is this cost?**

ACT.	NORMAL TIME	NORMAL COST	MAXIMUM CRASH TIME	CASH COST (per week)
A	5	50	1	20
B	3	60	2	60
C	4	70	0	0
D	2	50	1	10
E	5	100	3	60
F	2	90	1	100
G	5	50	1	30
H	2x	60	0	40
I	3	200	1	200
		$730		





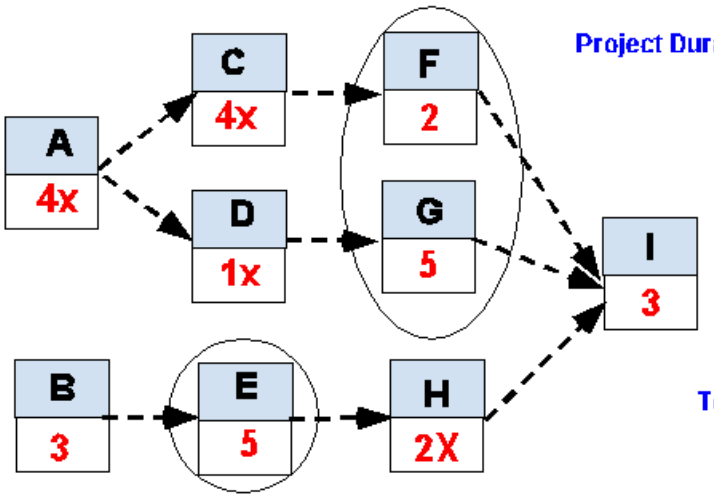
Project Duration 14

Activities changed

D

$10

Total Direct Cost $740



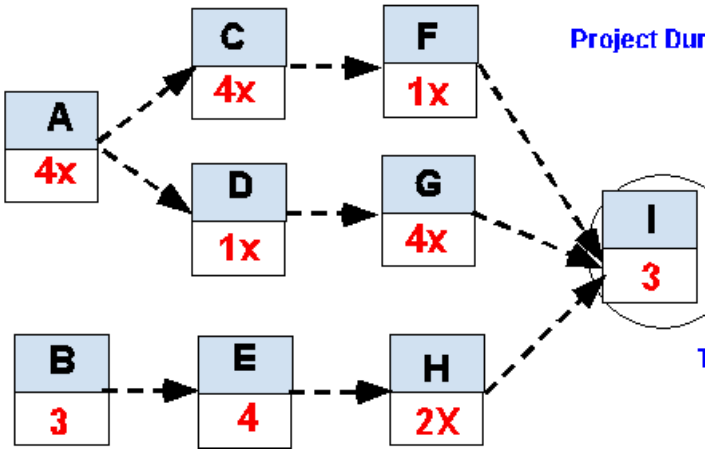
Project Duration 13

Activities changed

A

$20

Total Direct Cost $760

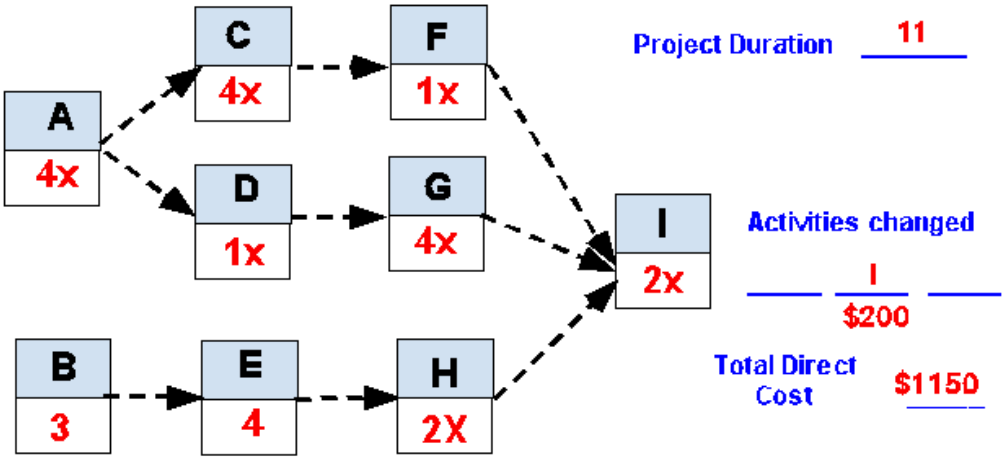


Project Duration 12

Activities changed

E $60 F $100 G $30

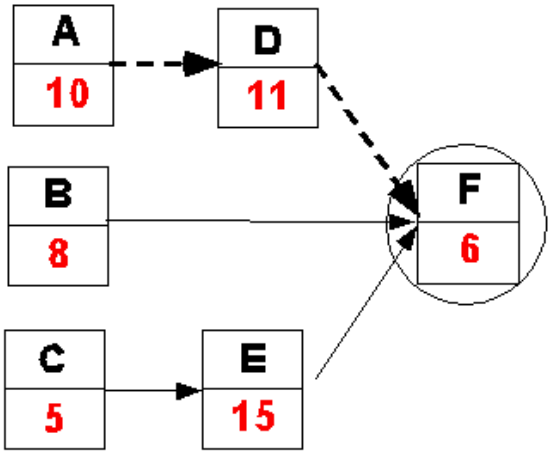
Total Direct Cost $950



PROJECT DURATION	15	14	13	12	11
TOT. DIRECT COST	730	740	760	950	1150
TOT. INDIRECT COST	90	70	50	40	30
TOTAL COSTS	820	810	810	990	1180

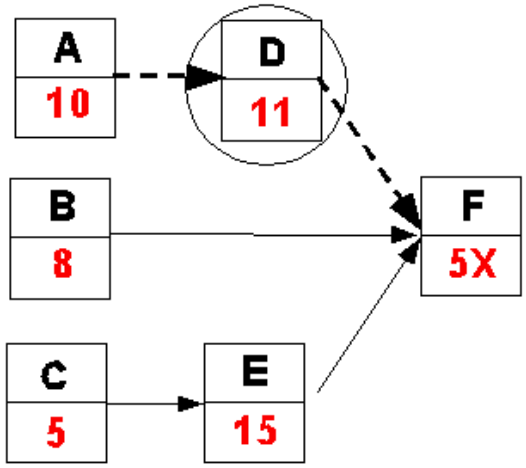
6. **If the indirect costs for each duration are $300 for 27 weeks, $240 for 26 weeks, $180 for 25 weeks, $120 for 24 weeks, $60 for 23 weeks and $50 for 22 weeks, compute the direct, indirect and total costs for each duration. What is the optimum cost–time schedule? The customer offers you $10 dollars for every week you shorten the project from your original network. Would you take it? If so for how many weeks?**

ACT.	NORMAL TIME	NORMAL COST	MAXIMUM CRASH TIME	CASH COST (per week)
A	10	40	2	80
B	8	10	3	30
C	5	80	1	40
D	11	50	2	50
E	15	100	4	100
F	6	20	1	30
		300		



PROJECT DURATION 27

TOTAL DIRECT COST $300

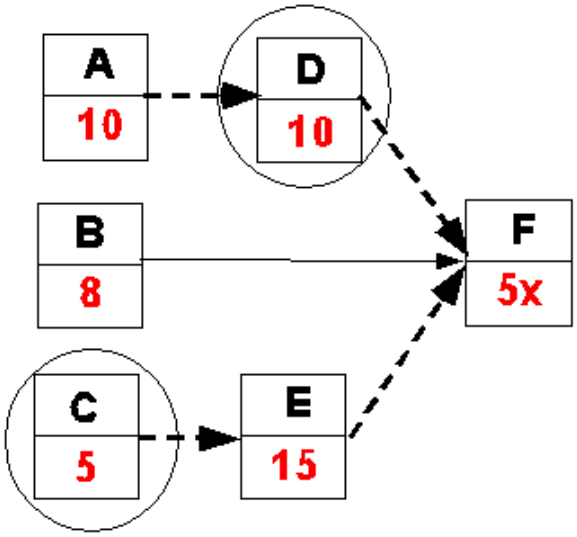


PROJECT DURATION 26

TOTAL DIRECT COST $330

ACTIVITIES CHANGED

F/30

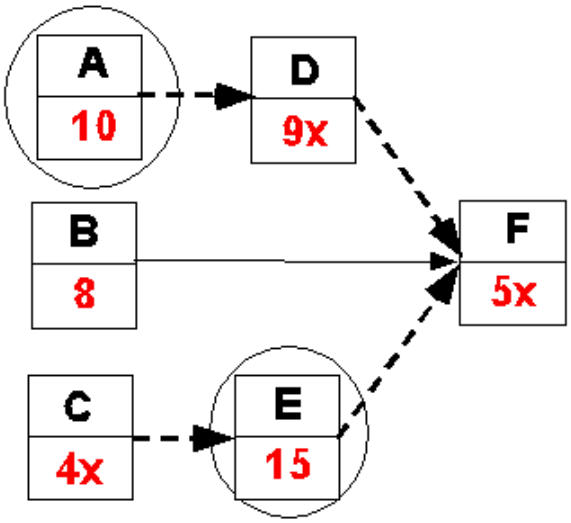


PROJECT DURATION 25

TOTAL DIRECT COST $380

ACTIVITIES CHANGED

D/50

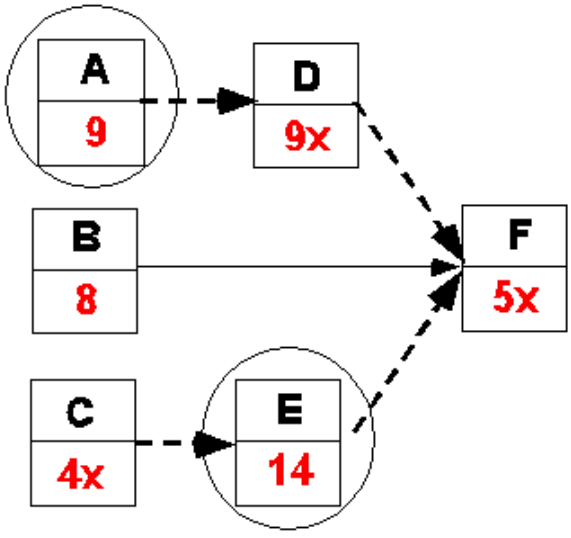


PROJECT DURATION 24

TOTAL DIRECT COST $470

ACTIVITIES CHANGED

C/40 D/50



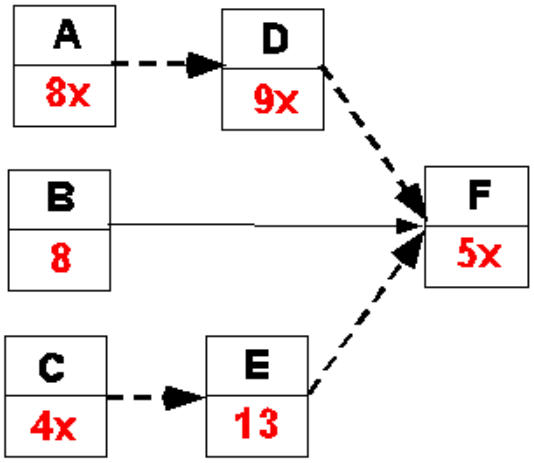
PROJECT DURATION 23

TOTAL DIRECT COST $650

ACTIVITIES CHANGED

A/80 E/100

5c



PROJECT DURATION 22

TOTAL DIRECT COST $830

ACTIVITIES CHANGED

A/80 E/100

PROJECT DURATION	22	23	24	25	26	27
TOT. DIRECT COST	830	650	470	380	330	300
TOT. INDIRECT COST	50	60	120	180	240	300
TOTAL COSTS	880	710	590	560	570	600
Incentive	-50	-40	-30	-20	-10	0
Costs with incentive	830	670	560	540	560	600

Take incentive down to 25 weeks, which is the low cost and optimum--with or without the incentive. However, you are increasing the chances of being late by creating two critical paths.