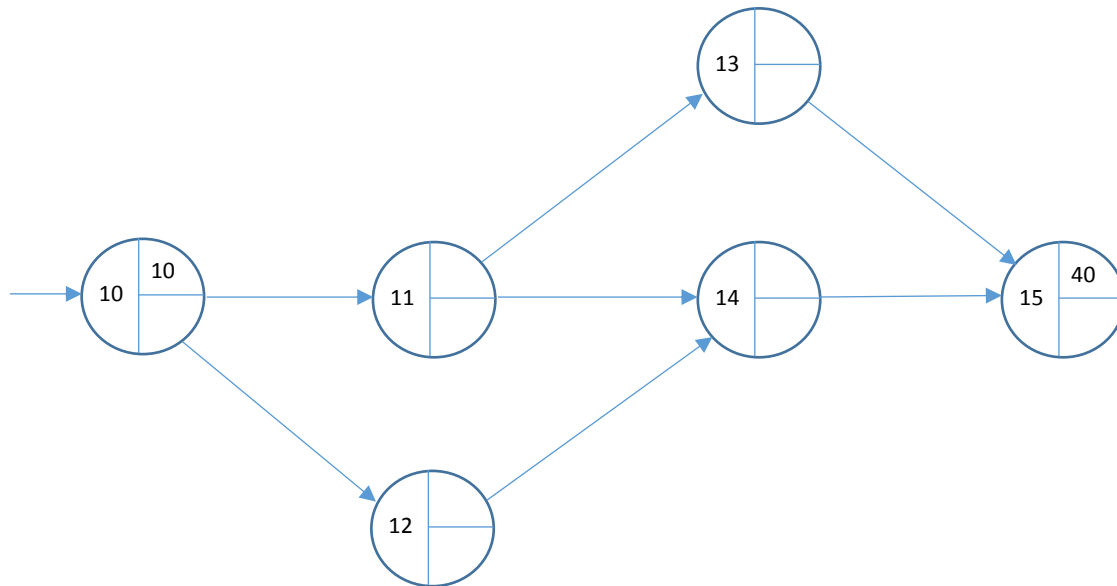


EXERCISE 3

We had some delay in the previous activities of this job. For this reason we have to reduce the total duration of works in the last part of our arrow diagram shown below. We talked with all subcontractors and calculated normal time, normal cost, crash time and crash cost for every activity as shown in table below. We also know that indirect costs are estimated in £200/week.



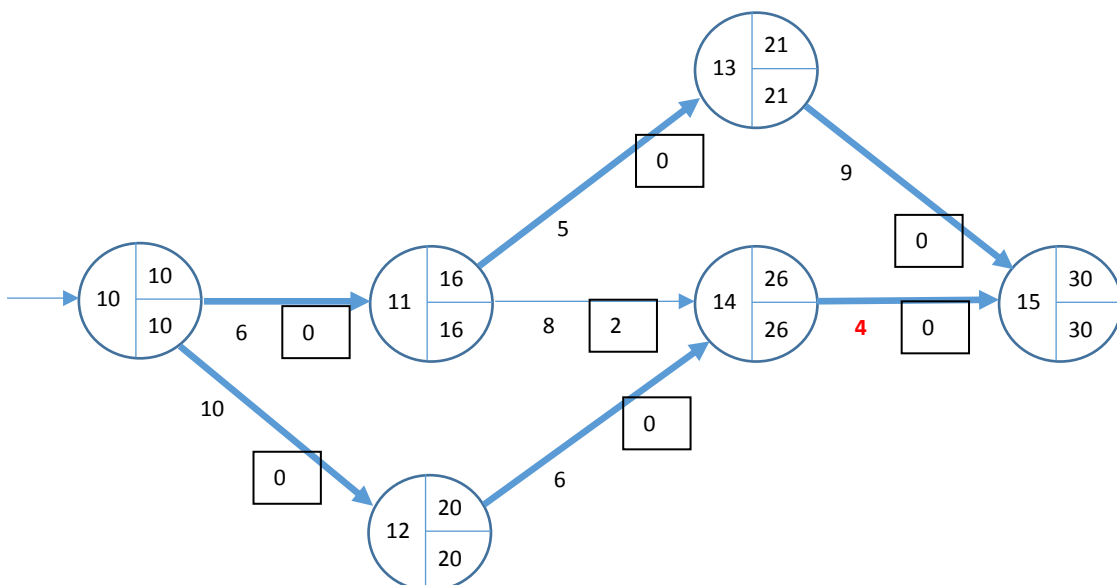
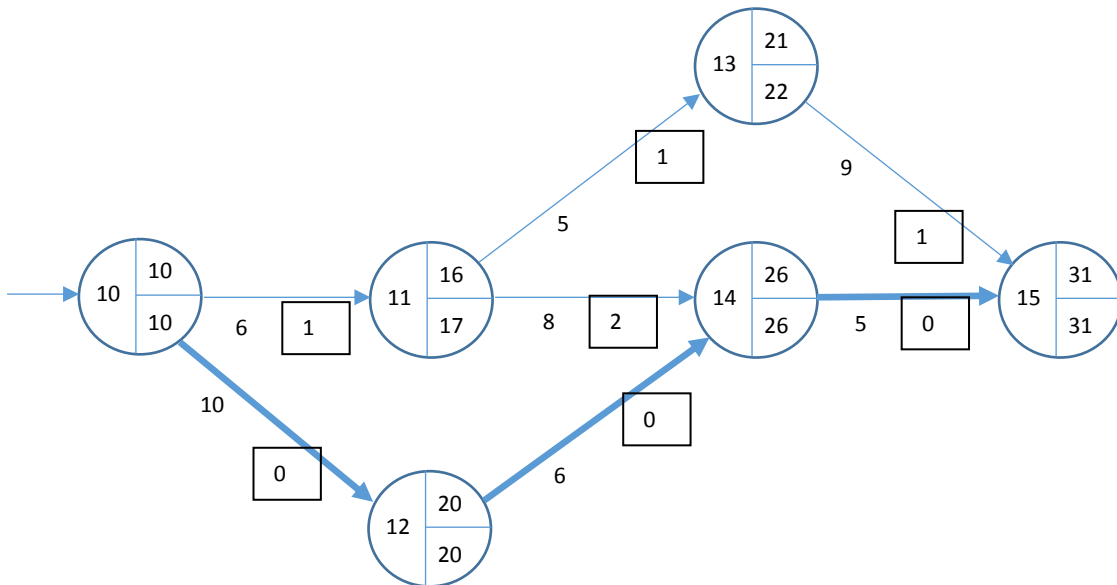
	Normal time	Normal cost	Crash time	Crash cost
10-11	6 weeks	£10,000	5 weeks	£15,000
10-12	10 weeks	£25,000	8 weeks	£28,000
11-13	5 weeks	£15,000	4 weeks	£16,000
11-14	8 weeks	£12,000	7 weeks	£15,000
12-14	6 weeks	£25,000	4 weeks	£29,000
13-15	9 weeks	£30,000	7 weeks	£38,000
14-15	5 weeks	£20,000	4 weeks	£20,500

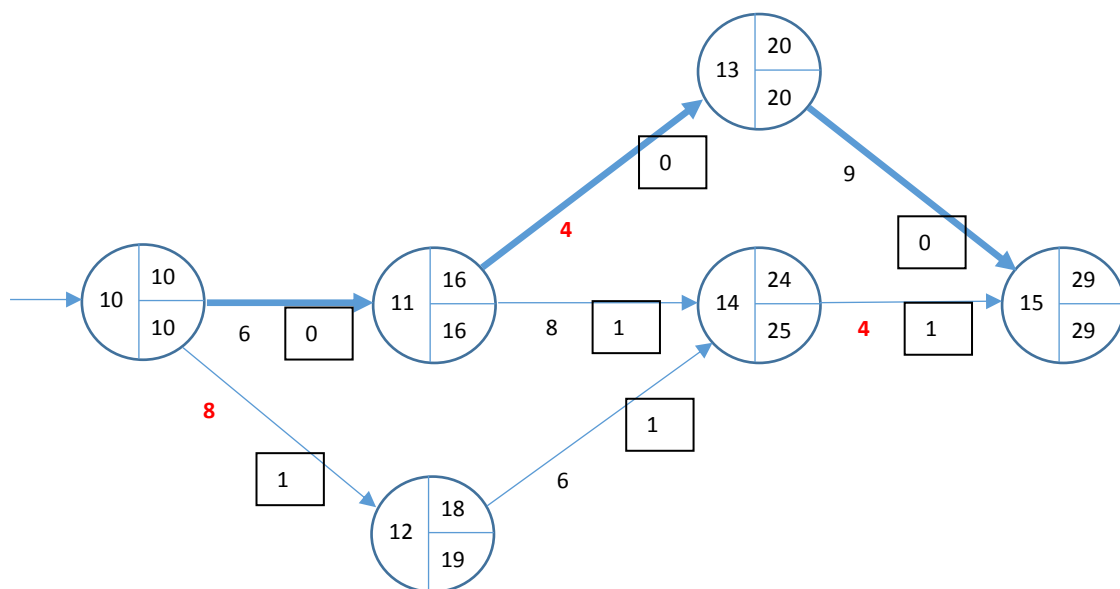
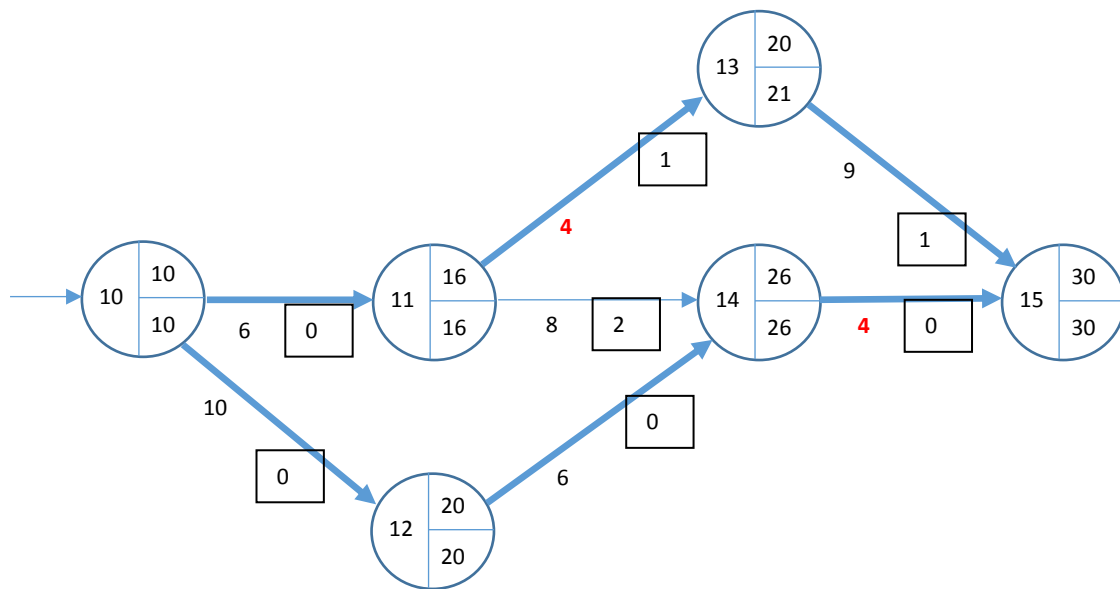
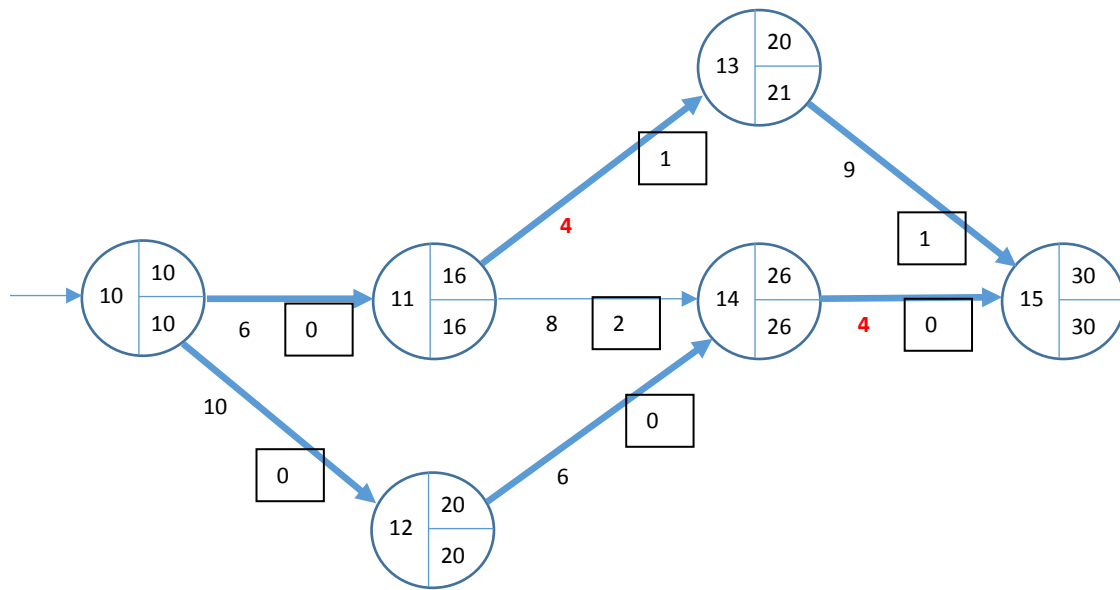
Answer the following questions:

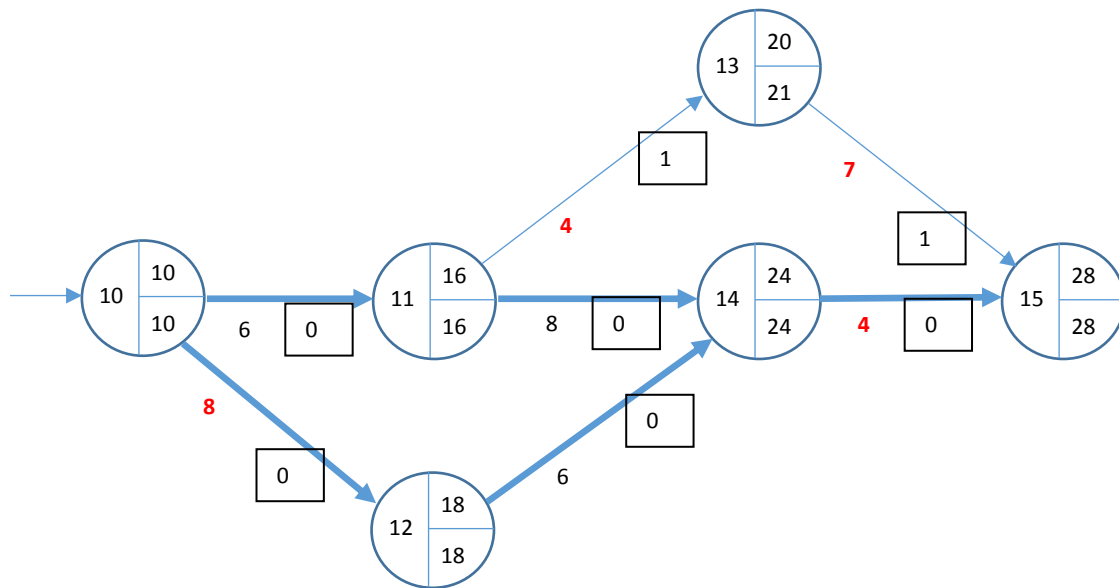
1. The project manager is convinced the cheapest way to reduce the total duration for 2 weeks is with activities 11-13 and 14-15. Do you agree with him?
2. We need to reduce the total duration for 3 weeks. Which activities would you choose?
3. How much is the total project cost?

SOLUTIONS

	Cost slope
10-11	£5,000/week
10-12	£1,500/week
11-13	£1,000/week
11-14	£3,000/week
12-14	£2,000/week
13-15	£4,000/week
14-15	£500/week







If we reduce activity 13-15, the cost slope is smaller than 10-11 but we have to reduce 2 weeks, what is a total cost of £8,000, whereas if we reduce activity 10-11 for 1 week it will be £5,000. In that case it is cheaper to choose 10-11.

Direct cost

Activity 10-12 £3,000

Activity 11-13 £1,000

Activity 10-11 £5,000

Activity 14-15 £500

Total: £9,500

Indirect cost

3 weeks x £200 = £600

Total project cost = £9,500 - £600 = £8,900