Planning feasible journeys

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. A lesson starts at 14:20. Travel takes 25 minutes and settling in takes 5 minutes. Find the latest departure. [2 marks]

25 + 5 = 30 minutes.

14:20 − 30 minutes = 13:50.

Answer: 13:50

2. A walk takes 18 minutes. A bus leaves at 11:25. If you leave home at 11:04, how much time is left before departure? [2 marks]

11:04 + 18 minutes = 11:22.

11:22 to 11:25 is 3 minutes.

Answer: 3 minutes

3. An outing has parts lasting 25, 40, 15 and 30 minutes. It must fit into 2 hours. How much spare time is there? [2 marks]

25 + 40 + 15 + 30 = 110.

120 − 110 = 10 minutes.

Answer: 10 minutes

4. A trip begins at 09:00. Plan A takes a 30-minute bus, a 10-minute wait and a 15-minute walk. Plan B takes a 20-minute bus, a 25-minute wait and a 15-minute walk. Which arrives earlier, and by how much? [3 marks]

A takes 55 minutes and arrives at 09:55.

B takes 60 minutes and arrives at 10:00.

Answer: Plan A arrives 5 minutes earlier.

5. You must be home by 14:00. A tour has return options arriving at 13:45 and 14:10. Which meets the deadline, and how much time does it leave? [2 marks]

13:45 is before 14:00.

14:10 is too late.

14:00 − 13:45 = 15 minutes.

Answer: The 13:45 option, leaving 15 minutes.

6. A plan lasts exactly 150 minutes, the whole available window. Give one reason it may be risky, and one sensible change. [2 marks]

There is no spare time.

A suitable change creates a buffer without ignoring a fixed appointment.

Answer: A delay could make the finish late. Shorten an optional activity or allow a longer window.