Planning journey connections

6 questions | 11 marks

Equivalent correct methods earn the corresponding marks.

1. A bus arrives at 11:20. The next bus departs at 11:42. How long is the gap? [1 mark]

11:20 to 11:42 is 22 minutes.

Answer: 22 minutes

2. A train arrives at 14:08. Walking to the bus takes 9 minutes. Find the earliest ready time. [1 mark]

$14:08 + 9\,\text{minutes} = 14:17.$

Answer: 14:17

3. Use the connections table. After A arrives, a transfer needs 10 minutes. Explain why B cannot be boarded. [2 marks]

Practice bus connections

Service	From	Departs	Arrives
A	Suburb to Central	08:10	08:35
B	Central to Museum	08:43	09:05
C	Central to Museum	08:50	09:12
D	Central to Museum	09:10	09:32

$08:35 + 10\,\text{minutes} = 08:45.$

The bus leaves 2 minutes too early.

Answer: Ready time is 08:45, but B leaves at 08:43.

4. Use the connections table. After A arrives, a transfer needs 10 minutes. How much spare time remains after walking if C is chosen? [2 marks]

Practice bus connections

Service	From	Departs	Arrives
A	Suburb to Central	08:10	08:35
B	Central to Museum	08:43	09:05
C	Central to Museum	08:50	09:12
D	Central to Museum	09:10	09:32

Ready time is 08:45.

C leaves at 08:50, so 5 minutes remain.

Answer: 5 minutes

5. A traveller arrives at 15:36 and needs 12 minutes to transfer. Services leave at 15:45, 15:50 and 16:05. Which is the first possible service? [2 marks]

Ready time is 15:48.

15:45 is too early. 15:50 is the first departure at or after 15:48.

Answer: 15:50

6. Use the connections table. A is 7 minutes late and the transfer needs 10 minutes. Compared with the original first possible connection, how much later is Museum arrival? [3 marks]

Practice bus connections

Service	From	Departs	Arrives
A	Suburb to Central	08:10	08:35
B	Central to Museum	08:43	09:05
C	Central to Museum	08:50	09:12
D	Central to Museum	09:10	09:32

Without the delay, C reaches the Museum at 09:12.

With the delay, D is first possible and arrives at 09:32.

09:12 to 09:32 is 20 minutes.

Answer: 20 minutes later