Elapsed time across midnight

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Find the time from 23:15 to 00:05 the next day. [2 marks]

$45 \text{ min to midnight} + 5 \text{ min} = 50 \text{ min}.$

Answer: 50 minutes.

2. Find the time from 21:40 to 02:10 the next day. [2 marks]

$2 \text{ h } 20 \text{ min} + 2 \text{ h } 10 \text{ min} = 4 \text{ h } 30 \text{ min}.$

Answer: 4 h 30 min.

3. Add 1 h 35 min to 23:10. [2 marks]

50 min reach midnight; another 45 min remain.

Answer: 00:45 next day.

4. A shift runs from 18:30 to 01:00 the next day. Find its duration. [2 marks]

$5 \text{ h } 30 \text{ min until midnight} + 1 \text{ h} = 6 \text{ h } 30 \text{ min}.$

Answer: 6 h 30 min.

5. An event finishes at 00:20 Tuesday after lasting 2 h 45 min. When did it start? [2 marks]

Subtract 20 min to 00:00 Tuesday; another 2 h 25 min takes you back to 21:35 Monday.

Answer: 21:35 Monday.

6. Convert 2.5 hours to hours and minutes, then add it to 22:50. [2 marks]

$0.5 \times 60 = 30$ min.

$22:50 + 2 \text{ h } 30 \text{ min} = 01:20$ next day.

Answer: 2 h 30 min; finish 01:20 next day.