Time-zone differences

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. UTC+2 shows 09:15. Find the simultaneous time at UTC+5. [2 marks]

The destination is 3 h ahead.

Answer: 12:15.

2. UTC+9:30 shows 17:20. Find the simultaneous time at UTC+8. [2 marks]

Subtract 1 h 30 min.

Answer: 15:50.

3. UTC−4 shows 11:35. Find the simultaneous time at UTC+1. [2 marks]

The gap is $1-(-4)=5$ h.

Answer: 16:35.

4. UTC+10 shows 20:10. Find the simultaneous time at UTC−2. [2 marks]

The destination is 12 h behind: 20:10−12 h=08:10.

Answer: 08:10.

5. UTC+5:30 shows 13:45. Find UTC. [2 marks]

Subtract 5 h 30 min.

Answer: 08:15.

6. A student converts 10:00 at UTC+8 to UTC+9:30 and gets 11:30. Reverse the conversion to check. [2 marks]

The clock difference is 1 h 30 min in each direction.

Answer: 11:30−1 h 30 min=10:00, so the answer is correct.