Date changes

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. UTC−2 reads Thursday 22:45. Find the simultaneous day/time at UTC+4. [2 marks]

Add 6 h; cross midnight once.

Answer: Friday 04:45.

2. UTC+10 reads Tuesday 03:20. Find the simultaneous day/time at UTC+1. [2 marks]

Subtract 9 h; cross back to Monday.

Answer: Monday 18:20.

3. UTC+14 reads Wednesday 10:00. Find the simultaneous day/time at UTC−10. [2 marks]

Subtract 24 h exactly.

Answer: Tuesday 10:00.

4. UTC−6 reads Sunday 20:15. Find the simultaneous day/time at UTC+5:30. [2 marks]

Add 11 h 30 min.

$20:15 + 11:30 = 31:45$; subtract 24 h.

Answer: Monday 07:45.

5. UTC+3 reads Saturday 00:05. Find the simultaneous day/time at UTC−1. [2 marks]

Subtract 4 h and go to the previous day.

Answer: Friday 20:05.

6. UTC+8 reads Monday 22:50. A simultaneous clock at UTC+11 is claimed to show Monday 01:50. Correct the full answer. [2 marks]

The 3-hour addition crosses midnight; the day must advance.

Answer: Tuesday 01:50.