# 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: $20:10-12\text{ h}=08:10$.

**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:** $11:30-1\text{ h }30\text{ min}=10:00$, so the answer is correct.